

UBM SET





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All Advertisements intended for insertion in the current Month must be sent to **THE PUBLISHER** on or before the 12th, except Employers' and Assistants' Advertisements, which can be received up to 10 a.m. on the morning previous to publication.

OUR COUNTRY AND COLONIAL SUBSCRIBERS are requested to furnish the Editor with any trade gossip that they may consider interesting.

Subscribers are requested to observe that, for the future, the receipt of **THE CHEMIST AND DRUGGIST** in a *Green Wrapper* indicates that with that number the term of subscription has expired, and that no further numbers will be sent until the same has been renewed. We issue the notice very respectfully, not that we distrust our Subscribers, but simply because we find it impossible to keep an immense subscription list like that we now have, extending to almost every town in the world, in order without an exact system like this.

## Editorial Notes.

### THE NEW COUNCIL.

**W**HETHER it be the effect of the proposed Poison Regulations, of the late proceedings in connection with the Patent Medicine Question, or simply of a general desire to infuse new blood into the Council we know not, but certain it is that the coming election has already excited more interest than any previous one which we can remember. Whatever may have been the particular reasons which have induced the members of the Pharmaceutical Society to nominate twenty-seven candidates to fill fourteen vacancies, we cannot help feeling that it is a good healthy sign that there are so many eligible men willing to devote their time to the interests of the Society and the trade at large. Our readers are probably aware that six of the present councillors—Messrs. CARTEIGHE, INCE, MORSON, ORRIDGE, RANDALL, and SQUIRE—retire, the two former to continue their services as Examiners, should succeeding Councils think fit to elect them, in accordance with the new Bye-laws, which require, and, in our opinion, very properly, the separation of the office of Councillor and Examiner; and the four latter (with the exception of Mr. RANDALL, whom we hope, after another quinquennial period, to see again at the Council table) to rest on their well-earned laurels. It would be presumptuous to say anything at the present moment of the varied services of these gentlemen; but it is worth mentioning, as a singular fact, quite unique, that though some of the present councillors have held their seats for periods varying from two to twenty-five years, Mr. SQUIRE is the only one who has retained his *uninterruptedly* since the foundation of the Society—now nearly thirty years ago.

Messrs. ABRAHAM, BOTTLE, EDWARDS, EVANS, HASELDEN, SAVAGE, STODDART, and WILLIAMS are the members of the present Council who offer themselves for re-election. Mr.

ABRAHAM is of three years' standing, and Messrs. STODDART and WILLIAMS have served but two, whilst the other five named have held seats for periods of from eight to twenty years. Mr. HASELDEN has for many years done an immense deal of hard, plodding work, work unseen and often unappreciated, but which must be carefully attended to, and is often distasteful to the majority of the Board; but we do not know of any signal services the other gentlemen named have performed which should justify their being retained in preference to some of the new men on the list; but in this matter the constituency is in a better position to judge than ourselves. The names of the new candidates will not be officially known until next month, but we learn on good authority that Messrs. ATHERTON, of Nottingham, GROVES, of Weymouth, REYNOLDS, of Leeds, and SUTTON, of Norwich, in the provinces, and BARNES, BETTY, CORNELIUS HANBURY, QUILLER, CHARLES SAVORY, and SAMUEL STACEY, in London, are amongst those who have consented to stand the election.

Of the merits of the first four it would be difficult to speak adequately; they are *typical* men, who love and serve Pharmacy for its own sake, whose knowledge of business is extensive, and whose views on all general questions affecting the trade are liberal and progressive. Moreover, they come from districts not at present represented; Messrs. ATHERTON and REYNOLDS, from the Midland, Mr. GROVES, from the Southern, and Mr. SUTTON from the Eastern—which seems to have been quite forgotten, till the visit of the British Pharmaceutical Conference to Norwich taught members that there were good and wise men in the East as well as in the West. Messrs. ATHERTON and SUTTON have both held the office of Local Secretary to the Conference; and who does not remember, with a feeling of gratitude, the energy, perseverance, and liberality they displayed in the performance of their arduous duties?

Of the new London candidates, Messrs. CORNELIUS HANBURY, CHARLES SAVORY, and SAMUEL STACEY hail from the historic houses, and are, as far as we know, the only representatives of the “Chemist and Druggist” class of members. We do not hold that great names alone are sufficient recommendation for office; but when coupled with business capabilities of a high order, the possessors form an important element in any public body, and are often able to produce influence for good upon the Government, other corporations, and the public.

Mr. BETTY is already well known to the constituency; he was very nearly elected last May, and there is no doubt that, this time, he will be returned, and make a most efficient councillor.

Messrs. BARNES, QUILLER, and W. A. SANGER, are very suitable men. The two former represent the early class of examined members, take great interest in all trade questions, are eminently good workers, and would be acquisitions. Pure Pharmacy and Patent Medicines are rolled into one in the person of Mr. W. A. SANGER. All trade interests should undoubtedly have a voice at the Council table; and when a young aspirant, who, while representing a particular class, is yet an examined Pharmaceutical Chemist and the first Pereira Medallist, expresses his willingness to serve the Society, we feel the electors will do themselves honour by returning him.

A fear is expressed in some quarters lest too many provincial members should be elected to form a good working Council. It will be remembered that when the new Bye-laws were being drafted, it was proposed to limit the number of country councillors to seven; this was objected to as being uncalled for, and it was asserted that the electors would always use their privileges wisely and for the general welfare of the Society. We trust they will in



the present instance. Our friends in the country must bear in mind, that if the provincial element preponderates, the *real* business, mostly transacted by Committees meeting once or twice a week, and never attended by country members, will fall into the hands of the officers of the Society, the President, Vice-President, and Secretary for the time being, who are always in the very nature of things rather Conservative, even if they be not bound hand and foot with red tape. Such a state of affairs would be a parody on the truly *representative* character of the Council.

It is with much pleasure that we record the decision of the Council of the Pharmaceutical Society respecting their *Conversazione* this year. For several years past we have commented upon the uncomfortable crowding which the visitors at these otherwise admirably arranged *réunions* have had to suffer, and last year we expressly suggested that in view of the altered position of the trade, and the flourishing pecuniary circumstances of the Society, it would be an act of grace if the future gatherings could be held at some other place, where space should be more abundant, so that not only might the old *habitués* of Bloomsbury-square be made more comfortable, but that many new and more beautiful visitors might also be admitted. It is satisfactory to find that this suggestion will this year be carried out to the letter. The South Kensington Museum has been engaged for the evening of Wednesday, the 18th of May, and each *Member* and invited guest will have the privilege of introducing a lady. Associates and Apprentices are to be admitted as usual, and the Council have liberally resolved to give a ticket of admission to any Registered Chemist and Druggist who may apply for one. A military or string band will be in attendance to assist the ladies to cheer the hearts of those pharmacists who may be seriously affected by the discussion on the Poison Regulations. Gentlemen intending to honour the President and Council with their company should apply, early in May, for tickets of admission to the Secretary, 17, Bloomsbury-square, W.C. We think that every applicant who requires a ticket forwarded by post should supply the necessary stamp. We cannot doubt that the *Conversazione* of 1870 will surpass all former meetings of the Society in brilliancy.

OUR foreign issue is this month, and will be in future, printed on a specially manufactured thin paper, and we think a word of explanation is due to our subscribers in the colonies and elsewhere. The appearance of the journal is in no way injured, but those who bind our numbers might reasonably wonder why we should make the alteration in the course of a volume. It is simply in consequence of the new and sudden Post Office regulations concerning newspapers for the colonies, which, unless we had adopted this course, would have considerably increased our postage expenses—already sufficiently heavy. Such papers as the *European Mail*, the *British Trade Journal*, and others which have an immense circulation exclusively abroad, will be hit very hard by this impost, and we cannot but express an opinion that these are hardly the times to interfere in the least degree with the utmost freedom of communication between the mother country and her colonial dependencies.

The following is the notice we refer to:—

#### NEWSPAPERS FOR PLACES ABROAD.—LIMITATION OF WEIGHT.

On the 1st of April next and thenceforward, registered newspapers for all places abroad, without distinction, will be chargeable according to weight, and each newspaper, whether sent singly or in a packet containing more than one, will be liable to a separate rate of postage for every

four ounces or fraction of four ounces. There will be no alteration in the present rates of postage for single newspapers weighing less than four ounces. From the same date, a limit will be fixed to the gross weight of a packet of newspapers, books, or patterns addressed to any place abroad; and no packet (Parliamentary proceedings only excepted) exceeding 5lbs. in weight will be forwarded through the post.

In the *Chicago Pharmacist* for March, Mr. LOUIS STREHL exposes a commercial fraud. An article labeled "*Light Sulphate of Quinine; manufactured by Lord Bros., Ludgate-hill, London,*" has been sold in Chicago. The manufacturers being unknown, the "quinine" was submitted to analysis, and was found to be *hydrochlorate of cinchonine*. This salt resembles sulphate of quinine so closely, that the substitution might readily escape detection. Mr. STREHL says: "The manufacturers have taken advantage of this resemblance to perpetrate an extensive and most reprehensible fraud, and it is to be hoped that their field of operation may be transferred from Ludgate to 'Newgate,' with the privilege of conducting business in the latter locality for an unlimited period."

THE rising generation of Pharmacists are indebted to Mr. THOMAS HYDE HILLS for many substantial benefits. This gentleman is continually casting his bread upon the waters. He has studied the art of giving, and he practises it without ostentation. His heart and his purse open simultaneously, whenever sympathy and help are needed by workers in the cause of Pharmaceutical education. We now hear that he has contributed Five Guineas to the Special Library Fund of the Manchester Chemists and Druggists' Association. This gift is the type of a series.

THOSE of our readers who have been in fear and trembling lest the proposed abolition of the Patent Medicine Licence and Stamp should become an accomplished fact, will be pleased to hear that the Chancellor of the Exchequer, in his Budget, has left this source of revenue *untouched*.

THE subscribers to the SANDFORD TESTIMONIAL will be gratified to learn that Mr. J. P. KNIGHT has completed the portrait, and that it will be admitted to the annual exhibition of the Royal Academy, commencing in May. One or two members of the Portrait Sub-committee have had the opportunity of inspecting it in Mr. KNIGHT's studio, and pronounce it an admirable likeness. The following will be inserted in the catalogue, opposite the number of the picture: "GEORGE WEBB SANDFORD, President of the Pharmaceutical Society of Great Britain, from June, 1863, to June, 1869. J. P. Knight, R.A. Painted by subscription. To be presented to the Society to commemorate the passing of the Pharmacy Act, 1868."

MEMBERS of the Pharmaceutical Society who desire to take part in the next election may require to be reminded that, under the Bye-laws, members whose subscriptions for the current year remain *unpaid* on May the 1st, become defaulters, and are not entitled to vote, nor can they exercise any of their privileges until restored by the Council.

WE believe that a Bill permitting Chemists and Druggists on the Register to exercise fully their calling in Ireland will be presented to Parliament during this session. At present, as our readers are doubtless aware, the compounding of medicines in Ireland is restricted to Apothecaries.



AFTER the completion of the present volume in June next, the *Pharmaceutical Journal*, altered in size and form, will be published *weekly*. In this step we see an indication of the liberal and progressive spirit of JACOB BELL, the founder and first proprietor of the *Journal*. Our own position cannot fail to be strengthened by the change. The official character of the *Journal* will become more decided, and the need of an independent monthly organ will consequently become greater.

WE regret to announce that Mr. CHARLES TITCOMB BLAKE, of 47, Piccadilly, Mr. SANDFORD's partner, died, after a long illness, on the 31st of May, aged 55.

WE intend to issue with our next number a carefully-executed portrait of

MR. THOMAS N. R. MORSON.

A short biographical sketch will also be given.

### CONSCIENTIOUS PHARMACY.

BY A PHARMACEUTICAL CHEMIST.

IS it possible for a man to be a chemist and druggist and to be honest? This is a blunt question and a startling one, and I feel that I am trespassing on the good-nature of a worthy editor when I propound it in these columns. But will any reader assert that it is a mere idle inquiry? Even if he can with reason and truthfulness and without hesitation give an affirmative answer, he will not be likely to dispute that there still exist many who, to judge from their practice, do not see their way so clearly to a satisfactory reply, and who might be benefited by considering their way, while it is quite certain that the purest pharmacist cannot be soiled himself by the mere proposition of the question. And one word to those who may be inclined to take offence at the question being asked at all. I would advise them not to be angry for offended dignity in such a case, as this is very like a confession of guilt, and dangerously suggests the figure of the whited sepulchre. An outburst of virtuous indignation sometimes accompanies that crowning act of dishonesty, want of honesty to oneself. It strikes me that the question has been proposed in a roundabout sort of way, perhaps unconsciously, by two or three eminent pharmacists, but I doubt whether it has ever been put so plainly and pointedly as I put it now. Surely, however, if the thought does ever occur to the best minds among us, it is more creditable and more manly to face the difficulty fairly and fully, whatever it may lead us to, than to exist in a constant state of agitation lest the customs of the trade should be dangerous to our morality and peace of mind, until we may have succeeded in so far strangling our conscientious scruples that we shall not be vexed by them any longer. One of the partners in the famous firm of Dodson and Fogg objected to the other's monotonous sermons on morality in the private sanctum, and so with us; even though we pharmacists were carrying on a systematic course of robbery out of doors—which is certainly not yet proven—we might as well be straightforward at home. For my part, I may say frankly that I am not at all inclined to take a desponding view of the moral necessities of pharmaceutical existence, and my present object is to deliver a friendly lecture to some of those guides, philosophers, and friends, whose various developments of conscientious pharmacy have roused us to ask the question in black and white, which has, we fear, lingered in the breast of many a timid, but most thoroughly honourable tradesman, whose business has been bit by bit abused, until he has become almost ashamed of himself and of the way in which he has fondly thought to

have earned an honest living. While I say this much, however, I am bound to add that my sympathy is with all those who earnestly endeavour, as many have done, to weed out from pharmacy all the dirty tricks which have been from time to time associated with it, and to make our business honourable and respectable in the truest sense of the word, and, *after that*, as profitable as possible. My momentous question cannot destroy one atom of that self-respect which has a worthy foundation; should it interfere with the self-esteem which is founded only on vanity, so much the better. There are men among chemists and druggists, as in every other calling, who, while they retain the confidence and respect of their neighbours, think nothing of stooping to any meanness, if they think it will pay, and so long as they are quite sure that they will not become legally criminal; and these will, perhaps, little relish the consideration of the subject which has thus been forced upon them. For even those, if there be such, who, offended at the sight of my first sentence, read no further, must now, willingly or otherwise, consider the matter to some degree, and come to some sort of mental conclusion about it. We have opened the bag, the cat has jumped out, and there must be some kind of hunt after her before she can be bagged again.

Well, then, as an assistance to those who are willing to turn the matter over in their minds for a few minutes, let me point out the Scylla and Charybdis of the argument. And this is all that need be done, for it is clear that if the limits of honesty can be satisfactorily determined, it would merely lie with each individual to consider whether he habitually has to overstep those limits in the prosecution of his trade. On the one hand, it must be remembered that honesty is an absolute, not a relative, quality—or to speak mathematically—quantity. It will, therefore, be no help for us to abuse our neighbours. Perhaps it would be easy to show that we pharmacists are not as other men are—grocers, bakers, drapers, lawyers, statesmen, even the clergy themselves, may in some respects all be worse than we are. But no amount of dirt on their characters will in the least degree affect the whiteness of our own, if such it be. But while we try to be fair to our imaginary accusers, let us be equally fair to ourselves, and here is where I think some of us fail. It is possible to look for flaws too narrowly, and to this microscopic scrutiny many errors of judgment may be traced. But what I chiefly complain of is, that some of the pharmaceutical writers who have handled questions of morality have seemed to have cultivated their consciences at the cost of their charity, sometimes at the cost of justice, to their neighbours.\*

Dogmatic conscientiousness is sometimes so uncharitable as to partake more of the nature of a vice than of a virtue; but then dogmatism is always an element of strength. So it happens that a man in whose nature this trait is considerably developed, and who combines with it abundance of self-confidence, as he assuredly will, becomes, in a wider or narrower circle, according to his abilities or his circumstances, a little pope as infallible as any that the Ecumenical Council can make. And in that circle, it is quite certain that while a few may rebel, the majority will believe, obey, and perhaps tremble at the mandates which the Nebuchadnezzar of the hour may proclaim. This may happen in a kingdom or in a drawing-room, in a senate or in a vestry-meeting. It does happen

\* As the most prominent writer on the subject of pharmaceutical ethics is Mr. Joseph Luce, it may occur to some that he is one of the writers alluded to. I should be very sorry to allow such an impression to remain on the mind of any reader, as I regard Mr. Luce's communication to the Nottingham Conference as a model of fair criticism.



at any rate among those who practise the science and art of pharmacy. We have several recognised oracles, and it is moderately certain that when one of these "comes down" on any particular trade practice which he may not approve, 75 per cent. of those who compose his circle will shudder at the crime which they then for the first time fear they have been participators in, and though it does not happen that they always relinquish it altogether, they certainly manage to make themselves very uncomfortable about it. Now of course it may happen that these ethical giants may occasionally "spot" a real abuse, and then their force is unquestionably of good service. But notoriously many of the objects of their wrath are as harmless as Don Quixote's windmills, and the wisdom of spending so much fury on them is at least doubtful. Counter-prescribing, selling, or making patent medicines, advertising in any shape or form, and giving Greek names to simple mixtures, have at various times been the offending tendencies of fallen pharmacists, and these and similar practices have called forth from one or another of our oracles the most violent indignation. I am aware that the word "unprofessional" has been generally employed to represent what in the writer's opinion was neither exactly right nor exactly wrong; but this word, as far as it conveys any meaning at all, is only a manifestation of not very creditable vanity, and we do not understand why, if want of integrity is clearly meant, the writer should not adopt some very much more decided expression. The standard of morality is the same for a gentleman engaged in a profession as for a mechanic or a merchant; the standard of expediency, however, may and does vary with circumstances and positions, and the judgment of the chief actor must always be applied as a guide in every individual instance. Is there not, then, on such questions as we usually find discussed in this manner, more room for charity and generosity than for dogmatic abuse? And even on questions of absolute morality, while it is clear that every man should be able to decide promptly for himself, and should act according to his decision, it is not by any means so clear that he is always competent to decide for every one else. In one of his orations, Cicero put a case which, with almost balanced opinions on either side, has been discussed by most of the ablest metaphysicians since his day. A famine, he said, occurred in Greece, and, as we need not explain, means of communication with other parts of the world being then very limited, it had continued for some time before it became known to other countries where plenty abounded. When the news reached Egypt, many merchants of Alexandria at once fitted up ships laden with grain to send to Greece, where they knew a good market awaited them. A large fleet was soon on its way, but one ship, favoured by winds, or perhaps by its own good sailing qualities, reached its destined haven first. The captain knew that in a few hours, by the arrival of the rest, abundance would reign, while now the demand was fierce and eager. Was he bound in strict honesty to disclose to his customers such information as he possessed, or had he the right to make the most of his fortunate, and their unfortunate, position? Into the arguments, for and against, which have been advanced by the many writers who have taken this as a standard ethical inquiry, it is not necessary that I should enter. It is sufficient for my purpose to point out that much may be, and has been said on each side; and it is a singular fact that while most of the English moralists who have discussed the subject have defended the captain in the course which, if he was human, he doubtless adopted, the other side has been chiefly advocated by German logicians. I have mentioned this as a case wherein professed and disinterested writers on morals have given opposite opinions, and

it would not be difficult to show that many of the questions which have so often been settled in an off-hand manner by this or that Aristides of pharmacy have been quite as open to debate, indeed, have been of very much the same nature as the one we have alluded to. It is evident that the whole gist of the argument lies in the consideration of how far an honest man may go, or whether he may allow his conscience any elasticity at all. This is dangerous ground to tread upon, we know, for men are not apt generally to be over conscientious in commercial affairs. Shakespeare made one mistake if he never made another, when he wrote that "conscience does make cowards of us all." It is quite a coincidence in this century at least, to meet two men in a day who go in much fear of conscience. Perhaps things were different in Denmark when Hamlet lived there.

But to return to pharmacy. I have now before me two instances of the virtuous indignation which I have been referring to, in one of which a writer in this particular journal, and in the other, some hundreds, perhaps thousands, of very respectable men have been condemned and stigmatised as somewhat loose in morals. Here is the first; it is an extract from the *Proceedings of the American Pharmaceutical Association*, wherein a certain novelty which was noticed in these columns a year or two back is referred to, and is accompanied with a little exclamation of horror at one of the writer's remarks. I quote the passage italicising the naughty sentence of the English journalist:—"In recommending this useful contrivance, the editor of a British pharmaceutical periodical thinks the following suggestion congruent with the enlightened views of modern pharmacy:—'*We are inclined to think that a little mysterious machinery about a chemist's shop often adds to his reputation as a scientific man, and helps to maintain the dignity of the profession.*'" Cut away from the context, this sentence does seem to show a reckless disregard of pharmaceutical ethics, and I do not suppose that the writer would sanction a too rigid interpretation of his words. But I would ask the clever reporter of the American Pharmaceutical Association, whether he has ever heard of the practice of putting globes of coloured water in druggists' windows. It is a practice not altogether unknown in America; but as yet I have not heard of any prophet having arisen even in that immaculate land to condemn it. To my mind it is a somewhat senseless, but certainly not a criminal proceeding, and until I see reason to alter my views on this matter, I cannot regard the English journalist's remark with special abhorrence. When I am convinced that the exhibiting of red and blue bottles is criminal, I shall probably "come down heavily" on pharmaceutical journalists who venture to recommend anything that exhibits the least trace of carving, gilding, or fancy work.

The second instance is a letter which Mr. Giles, of Clifton, publishes in the *Pharmaceutical Journal*, on the Sale of Homœopathic Medicines. This letter is one of the worst specimens of that unpleasant style of composition which I have been trying to describe, and which is often adopted by the oracles of morality when they want to trim and shade everybody's conscience to the size and colour of their own. I do not find fault with Mr. Giles for holding opinions adverse to homœopathy, nor do I object to the means he has taken to make these opinions public. What I complain of, for reasons I have already indicated, is the intolerant, and in this case I am compelled to add, the insulting tone he has thought fit to adopt towards those whose opinions and practices differ from his own. Here is one sentence, which, without any injustice, may be taken as a specimen of the rest:—"It is nevertheless a fact, which we must not affect to ignore, that many pharmacists of



respectable standing have yielded (for lack of a little moral courage it must be) to this demoralising traffic, and have thereby brought scandal on their craft;—that is to say, have offended Mr. Giles's views of right. For this abnegation of principle" we are told the adjective "unprofessional" is hardly strong enough, and therefore we are treated to a definition of the practice as a "handy-dandy prank." This is probably a West-of-Englandism, signifying something very dreadful; but whatever it may mean, I do not think it would be very difficult to prove, that if the buying and selling of articles not of absolute necessity but of mere fancy is to be regarded in this terrible light, there are many tradesmen, chemists and druggists and others, who really could not get a living without descending to "handy-dandy pranks." If so, and if also, as I venture to assume, a "handy-dandy prank," being interpreted, means in plain English, dishonesty, then it must be admitted that the question with which I opened this paper is mournfully settled.

#### OBJECTIONS TO THE PROPOSED REGULATIONS FOR KEEPING, SELLING, AND DISPENSING POISONS.

THE following statement of Objections to the Proposed Regulations for Keeping, Selling, and Dispensing Poisons,\* has been drawn up by the committee of the Leeds Chemists' Association to accompany a memorial to the Council of the Pharmaceutical Society from the Chemists and Druggists of Leeds:—

1. That in the business of Chemists and Druggists in provincial towns, the stock of Poisons comprises supplies kept in the shop itself, and reserves stored in a warehouse, cellar, or other rooms. The Regulations would equally apply to all "Poisons" under either of these circumstances, and they would in many cases deal with large quantities in the hands of persons who were retail traders.

The option offered by the Regulations would fail to afford reasonable facilities for keeping such reserves, since Aconite, Belladonna, and Ergot of Rye, require to be kept under special conditions as to dryness, whilst it might be very inconvenient to keep other "Poisons" in the only part of the premises meeting this requirement.

Further, that the option of peculiar bottles, and of bottles tied over in a peculiar way, would be inapplicable to many solid "Poisons," and consequently that there is no choice of methods of storage in such cases.

Further, that in the case of such liquid "Poisons" as Syrup of Poppies, Compound Tincture of Camphor, etc., no bottles answering the requirements of the Regulations, and at the same time capable of storing a few gallons, are procurable.

Finally, the Regulations do not, and probably cannot be made to define any exemption of wholesale traders, and yet it is evident they are quite unsuited to such members of the trade.

2. That the selection of a peculiar bottle which could be distinguished by the sense of touch was originally proposed for dispensing bottles, to prevent mistakes on the part of ignorant, careless, or exhausted nurses, perhaps in a darkened room, or having to attend to the sick during the night.

But the argument is not applicable to the legally qualified Chemist and Druggist, who does not carry on his business under similar disqualifications.

3. That a variety of Lozenges, Pills, etc., may still be

considered as legally within the definition of "Poisons" notwithstanding an opinion obtained through the Privy Council, and it is manifestly undesirable to further hamper the trade in these.

A law not carried out is not only inoperative but mischievous.

4. The compulsory use of peculiar bottles for dispensing Liniments, etc., does not appear to be deprived of its harshness by the words, "or bottles made distinctive," since the use of a roughened label, if not brought into contact with the person handling the bottle, could not be regarded as reasonably "distinctive." Those who have but little dispensing would be often placed in the position which their more favoured brethren would not unfrequently have to deprecate, in not having suitable "distinctive" bottles for some Liniment or Lotion. The discredit of having made a blunder would be the penalty for using a "distinctive" bottle not suited in size to the prescription.

5. The regulation as to dispensing Liniments, etc., in "distinctive" bottles would be supposed to have the universal application of a Parliamentary enactment. Now, in our own town, by far the largest portion of the medicines dispensed comes from the surgeries of medical practitioners, who would be exempt from regarding the Regulations.

We therefore view with much alarm the attempt to give the weight of legal authority to such a Regulation, and believe that accidents would be caused rather than prevented by it.

6. In connection with the extensive reliance upon mechanical safe-guards which forms the basis of the Regulations, it is to be noted that the list of legally-defined "Poisons" does not by any means comprehend all preparations liable to serious mistake in dispensing: thus Tincture of Digitalis and Tincture of Colchicum are excluded; and whilst the dispenser may now treat them in a precautionary manner, he would be committing a breach of the law if he adopted towards them any of the three methods of dealing with Poisons prescribed by the Regulations.

7. The compulsory use of the word "Poison" upon all such preparations, if to be carried out in a *bona fide* way by labelling the fronts of the bottles, would usually compel us to remove them from our shelves. We believe that a "distinctive" label both in keeping and dispensing "Poisons" is a reasonable security, and it ought not to be assumed that a dispenser ever fails to look at a label.

8. It is not to be supposed that a fine of £5 would be the only penalty imposed for the breach by an apprentice or assistant of the most trivial of the "Regulations."

The discredit attaching to a legal conviction might so damage the reputation of a Chemist and Druggist as to cause his ruin.

We hold that no sort of obligation rests upon the Pharmaceutical Society to make such enactments in the interest of the State.

The Society is carrying out earnestly and efficiently the educational functions which it undertook when Parliament conferred upon Registered Chemists and Druggists their present rights and privileges.

The Society has also amended and enlarged the Poisons Schedule which formed part of the Act. It cannot be a duty that we should place upon our own necks a grievous burden, which is not demanded by the State nor by any class of our fellow-citizens.

It is to be noted that no advantages or rights would be conveyed to us for accepting these new responsibilities, and

\* See CHEMIST AND DRUGGIST for January, page 9.



we believe that there is no precedent of a body of men asking to be allowed so to trammel their freedom.

9. So long as Lord Campbell's Act remains unchanged, we view with alarm such stringent and easily broken Regulations, which would fix the stigma of aggravated circumstances upon any one who unfortunately made a mischievous mistake.

## Our Foreign Correspondence.

### FRANCE.

PARIS, April 5.

**F**RENCH people take little physic; but that little must be nice. A Frenchman would as soon eat Cayenne pepper as swallow a black draught; hence the staple wares of the pharmacien are syrups, wines, elixirs, granules, or purgative lemonade, as gratefully refreshing as that of the cafés on the Boulevards. French physicians, too, nearly always try to tickle the palates of their patients by ingeniously hiding some powerful remedy in an agreeable vehicle: to wit, kermes in *loochs*, morphia in *potions gommeuses*, and by substituting for cod-liver oil the inimitable Elixir of Garus, beside which *Curacao* and *Chartreuse* of the golden-greenest hue lay down their laurels. And a delicately flavoured draught often proves a source of considerable profit to the pharmacist, for "good wine needs no bush," especially when sanctioned by the great guns of the infallible profession. But, however Lucullus-like Frenchmen may be in their choice of medicines, their pharmacies are most inconvenient and unbusiness-like. With the exception of Paris, and a few semi-anglicised places in the South, the *officines* are as conspicuous for their wretchedness as the pharmaciens are for their science and unpractical habits. Odd that while England has felt the necessity for pharmaceutical legislation, a large section should be crying out for free trade over here. And not altogether without reason; for in France and Germany, where pharmacy has been almost too much legislated for by paternal governments, the shops are the dirtiest, the business done the least, and the assistants the worst paid of any advanced country. However, we anticipate a new measure of reform in these matters.

Great wailing and gnashing of teeth has been heard in high places above the clink of pestles and mortars. M. Duruy, the ex-minister of Public Instruction, issued a decree, allowing second-class pharmaciens to establish themselves in Paris. Those hitherto here were all of the first class, and they vigorously protested against the validity of this liberal but arbitrary measure. The case has been before a high court, which has ordered all the second-class men to close their *officines*, and clear out in a fortnight. This is a great hardship for those young men, who, *on dit*, intend proceeding against the ex-minister for heavy damages. But as ministers were then irresponsible, they don't stand much chance of success.

The *élèves*, or assistants, have lately formed an association having for objects—early closing, protection of social interests, and provision for sick or incapacitated members. The first meeting was attended by over two hundred very noisy young men. After having read the proposed regulations, the chairman said, that owing to the necessary formalities not having been complied with, the police would not allow the discussion to take place that night, an announcement which was received with shouts of indignation, and the meeting separated in great uproar. The association has but indifferently succeeded, not numbering over a hundred members, and possessing little influence in the desired direction.

During the past month nearly all Paris has been vaccinated, and a good trade is done in little tubes of genuine cow-pox virus, in which they seem to have unlimited faith on this side of the Channel.

St. Clair-Deville, Dumas, and other scientific celebrities, have been carrying on experiments, with a view to ascertain under how many atmospheric pressures it is possible to exist. They lately invited some friends to sit down to breakfast in a boiler under a pressure of three atmospheres, but were very glad to open their safety-valve before the result could be ascertained.

Of trade novelties there are few: artificial manna, clean, white, and not easily distinguishable from the original; and artificial linseed-meal or marshmallow poultices, which promise to have a large sale. Pharmaciens, like their neighbours, complain of the dulness of trade; the only strangers in Paris seem to be Americans, who are almost as fond of physicing themselves as their insular relations.

I must recommend all *confrères* visiting Paris not to forget the *Ecole de Pharmacie*, and to witness, if possible, one of the public examinations, and compare them with those of the British institution. Strange that the old notation is still used here; the new has, in fact, but few adherents in France.

Chloral is still in great favour with the Parisian doctors. The amount used is very considerable, as tolerably large doses are given, varying from half to three and even four grammes. This last, however, repeated three times during the night, effected the death of the patient, an argument in favour of its cumulative action. White tincture of iodine, too, is in demand; a formula for which was published in the *Revue Médicale*, recommending the use of sodic hyposulphite to discolour the iodine. Methinks it would be wiser to order simply a solution of sodic iodide in preference to such anomalous preparations.

Government protection, although conferring certain benefits, has also its unpleasant side; for instance, although it prevents undue competition, the pharmacy becomes a general receptacle or temporary guard-house for all persons run over, for epileptic disciples of Bacchus, who always manage to kick about, and turn up their eye-balls at the approach of the formidable policeman in cocked hat and sword, who lugs them into the first druggist's shop, and there proceeds with pencil and pocket-book to dress a *procès verbal*, generally gesticulating and shouting sufficiently to assemble a crowd of sympathetic spectators in and around the shop. And nowhere is a crowd so easily gathered together, for all Parisians are *flâneurs*, and all *flâneurs* curious.

## Pharmaceutical Society of Great Britain.

EVENING MEETING, APRIL 6TH,\*

MR. H. SUGDEN EVANS, PRESIDENT, IN THE CHAIR.

**T**HE minutes of the preceding meeting were read, and subsequent donations to the library and museum acknowledged. Some specimens of Bromal Hydrate were on the table, exhibited by Mr. WILLIAMS, who was inclined to consider that the same might be found more powerful in its action than Chloral Hydrate, although he had not instituted any experiments in order to elucidate the point. Some convenient and inexpensive forms of Scales and Chemical Balances were also exhibited.

Mr. JOSEPH INCE made a communication on "Prescriptions for Examination," giving a statement of the Society's collection. He said he did not come before the members as a critic, or to find ingenious fault with the labours of the

\* Reported specially for this Journal.



past; he would merely say that the present collection of autograph prescriptions had become insufficient, either for examining or educational purposes. A society should be thoroughly representative of that particular branch of science it was established to promote. A knowledge both of the caligraphy and construction of prescriptions was the threshold of Pharmacy. He wished to place the matter under a new aspect, and contended strongly not only for the completion of the existing books used by the Board of Examiners, but for the creation of a library of reference. There were five books already, the contents of four of which had recently been doubled—one, a large scrap-portfolio, was dirty, most unfinished, and not slightly tattered. A learned antiquarian believed it to be the Pharmacopœia of the Ark, and its condition was due to long exposure on Mount Ararat. A sixth book was in active preparation. Mr. Ince then detailed the warm encouragement he had received in his attempt. During the past two months he had been able to contribute 500 recipes. About 5000 additional ones were required. These should be written in every variety of style, simple and complex, in the chief modern languages, and reflect, as far as possible, the present state of Pharmacy, as well as that of an earlier date; they should illustrate special modes of medical practice, and thus prove of real value to the student. Amongst their number should be contained specimens of celebrated men, such as Sir Benjamin Brodie, Sir Henry Holland, Bright, Chambers, Seymour, Golding Bird, and living practitioners. They should represent local pharmacy, not merely the practice of London, but that of our great English towns, of Paris, Brussels, Italy and Germany, not forgetting foreign cities of considerable importance, as Tours, Lille, or Amsterdam. Mr. Ince confidently asserted that this could be effected, and he paid a just compliment to those who had already helped. He was in possession of many French *ordonnances*, and West-end formulæ, while from the country he had received supplies from Clifton, Leamington, Nottingham, and Weymouth. A gentleman, well known in Oxford-street, had presented the whole collection of the late Jacob Bell. The tinting of the paper of this portfolio (buff demy) seemed admirably adapted for the purpose. In conclusion an appeal was made in favour of the plan. "I offer," said the reader, "an inexpensive good; nothing visionary, but something which by the soberest calculation is within our grasp. I do not come before you from any motive of listlessness or indolence, nor empty-handed, for I show work done. And recollecting the extreme personal indulgence which has smiled on every public undertaking I have yet attempted, I may translate the experience of the past into a promise for the future; and when I ask for aid in the establishment of a collection of autograph formulæ, which shall stand without a rival, I know that the members of a great society will not let me plead in vain."

The CHAIRMAN alluded to Mr. Ince's handsome gift, and the importance and necessity of the improvements he advocated.

Mr. HASELDEN dwelt on the various relations between prescription books, examiners, and candidates, and the inadvisability of submitting the examiner's books for study. He was always willing to show his collection to country candidates. It was difficult, for several reasons, to obtain prescriptions with exceptional doses.

Mr. INCE said his great object was to provide that the library should contain prescriptions for study. He could see no reason why the prescriptions used for examination should not be seen by the candidates. To shut up the prescription books was unworthy of the Society. From what he had been able to do himself he was sure that by December a representative collection might be obtained, if the Society

would assist. Even the miserable collection of 406 should be made public.

Mr. MARTINDALE said that although old prescriptions were interesting from an historical point of view, those exhibiting the exceptionally bad writing of fifty years ago should not be admissible for examination purposes.

Dr. ATTFIELD had lately found it necessary to procure a few prescriptions, and had no difficulty in getting them from friends. The question of collection resolved itself into a simple question of multiplication. If one man could collect a hundred, ten men could collect a thousand.

The CHAIRMAN hoped that the Society would assist in the laudable efforts of Mr. Ince; but whether the collection when made should be for the use of examiners or candidates, or for both, was quite another question.

Dr. REDWOOD alluded to the remarks made by Mr. Porter on Syrup of Hemidesmus at the last meeting. Mr. Gale had brought two samples, the one made by the Pharmacopœia process, the other by a different process; they might serve to illustrate the question.

Mr. GALE said he had prepared the second sample by the process detailed by Jacob Bell in the third volume of the *Pharmaceutical Journal*. It was six times the strength of the B. P. preparation.

Mr. PORTER said that Bell's preparation certainly was six times the strength of the other, but when diluted to the necessary point it was still very different from the Pharmacopœia preparation. The one, prepared by cold percolation, in addition to the fine aroma it possessed, was quite bright, while the other was muddy. Mr. Porter then gave Mr. Bell's process in detail.

Mr. HANBURY alluded with singular propriety to the trifling importance of the drug Hemidesmus.

There was some discussion as to the proper flavouring for Hydrate of Chloral, some gentlemen appearing anxious that an official recommendation on this point should be published.

Mr. MORSON thought it would be better to wait until the manufacture of Chloral had been perfected, and the form under which it would ultimately appear was satisfactorily ascertained. Mr. Morson then alluded to Opium, and the very inferior qualities now on the market. He showed a sample, which was of the appearance eagerly purchased by druggists, which contained only 3 per cent. of morphia, and another sample, apparently worthless, which contained 12 per cent. This was a sample of Persian opium, a variety sometimes sold in sticks, and frequently of exceptionally good quality, but liable to variation from adulteration. The adulterations now practised were more scientific than formerly, it being now possible to make easily an apparently good tincture from an adulterated opium.

Dr. REDWOOD briefly alluded to a paper he had received on Linseed Meal, pointing out the fact that this article was frequently contaminated with the seeds of a species of wild mustard, which had an irritating instead of a soothing effect on the skin, the proper function of the meal. The question was, whether the meal should be prepared in future from crushed seeds, instead of crushed or powdered cake. Further, Mr. Gissing wished to remind pharmacutists that he first raised the question of the suitability of the *Emplastrum Belladonnae* of the Pharmacopœia. He did not consider the question was satisfactorily settled.

The CHAIRMAN announced that another meeting would be held on the first Wednesday in May. Several changes would be made in relation to the *conversazione*. It would be held on the night of Wednesday, May 18, the same day as the annual meeting. Ladies would be admitted. It would be held at the South Kensington Museum, inasmuch as the



Society's house was not sufficiently convenient. In consequence of these changes, it would be absolutely necessary for all to obtain tickets from the Secretary.

#### MEETING OF THE COUNCIL, March 2nd, 1870.\*

MR. H. SUGDEN EVANS, PRESIDENT, IN THE CHAIR.

MR. HASELDEN, VICE-PRESIDENT

Present—Messrs. Abraham, Bottle, Bourdas, Brady, Cartefighe, Deane, Dymond, Edwards, Hills, Ince, Mackay, Morson, Orridge, Sandford, Savage, Squire, Stoddart, and Williams.

The minutes of the last meeting were read and confirmed.

The Report of the Finance and House Committee was presented, showing on the General Fund Account a balance in the Treasurer's hands of £937 3s. 9d., and on the Benevolent Fund Account a balance, after purchase of £500 Stock as ordered by last meeting, of £172 17s. 4d.; and submitting for payment accounts, and various items, amounting to £595 14s. 10d.

Resolved—That the Report be received and adopted, and payments made.

The Financial Statement for the Year 1869, and the Report of the Auditors having been read, it was moved by Mr. Hills, seconded by Mr. Squire, and

Resolved—That it be received and approved, and printed in the April number of the Journal.

Moved by Mr. Sandford, seconded by Mr. Orridge, and Resolved—That the sum of £500 be transferred from the General Fund of the Society to the Benevolent Fund.

The Report of the Library, Museum, and Laboratory Committee was read and received.

Resolved—That the Report of the Journal Publication Committee, recommending a weekly issue of the Society's Journal, be received and adopted.

Resolved—That the form in which the Journal shall be published, and other details, be referred to the Library, Museum, and Laboratory Committee, and that they be requested to report thereon at the next meeting of the Council.

Resolved—That the preparation of the Annual Report be referred to the Library, Museum, and Laboratory Committee; that when such Report shall have been approved by the Council, it be printed and issued with Voting Papers for the Election of the Council and Auditors for the ensuing year.

Resolved—That the Annual General Meeting of the Society be held on Wednesday, the 18th May, at 12 o'clock precisely.

Resolved—That a Conversazione be held at the house of the Society on Tuesday evening, the 17th May, at the usual hour, and that ladies be invited to attend.

#### REPORTS OF BOARDS OF EXAMINERS.

February, 1870.

##### ENGLAND AND WALES.

Feb. 11, Separate Examination, 8 candidates examined, 5 passed.				
11, Modified	36	"	"	28
25, "	39	"	"	25
16, Minor	6	"	"	5
" Major	16	"	"	10

Total . 105 71

Preliminary Examination, 11 certificates were received and approved.

##### SCOTLAND.

February 11th, 1870.

Minor Examination, 3 examined, 3 passed.				
Modified	6	"	"	5
Preliminary "	8	"	"	7
	17			15

#### BOTANICAL PRIZE FOR 1871.\*

A Silver Council Medal is offered for the best Herbarium, collected in any part of the United Kingdom between the 1st day of May, 1870, and the 1st day of June, 1871: and should there be more than one collection possessing such an amount of merit as to entitle the collector to reward, a second prize, consisting of a Bronze Medal, and also Certificates of Merit, will be given at the discretion of the Council. In the event of none of the collections possessing such an amount of merit as to warrant the Council in awarding medals or certificates, none will be given.

The collections to consist of Flowering Plants and Ferns, arranged according to the Natural System of De Candolle, or any other natural method in common use, and to be accompanied by lists, arranged according to the same method, with the species numbered.

The collector to follow some work on British Botany (such as that of Babbage or Bentham), and to state the work which he adopts. The name of each plant, its habitat, and the date of collection, to be stated on the paper on which it is preserved.

Each collection to be accompanied by a note, containing a declaration, signed by the collector, and certified by his employer, or a Pharmaceutical Chemist to whom the collector is known, to the following effect:—The plants which accompany this note were collected by myself, between the 1st day of May, 1870, and the 1st day of June, 1871, and were named and arranged without any assistance but that derived from books.

In estimating the merits of the collections, not only will the number of species be taken into account, but also their rarity or otherwise, and the manner in which they are preserved; and should a specimen be wrongly named, it will be erased from the list.

The collections to be forwarded to the Secretary of the Society, 17, Bloomsbury-square, on or before the 1st day of July, 1871, indorsed "Herbarium for Competition for the Botanical Prizes." After the

announcement of the award, they will be retained one month, under the care of the Curator of the Museum, for the inspection of persons connected with the Society, and then returned to the collectors, if required.

No candidate will be allowed to compete, unless he be an Associate, Registered Apprentice, or a Student of the Society, or if his age exceed twenty-one years.

## Abstracts of Foreign Papers.

### CHLORAL.

IN the *Journal de Pharmacie et de Chimie*, M. J. PERSONNE points out the fact that the hydrate of chloral, described by M. Roussin as pure, is nothing more than a compound of chloral and alcohol, having probably the formula  $C_4HCl_3O_2, C_4H_5O_2$ . His notice was first attracted to this question by the considerable variation in the melting and boiling points to be observed between pure hydrate of chloral, which he had himself prepared exactly in accordance with the formula given by M. Dumas, and that prepared by M. Roussin. The difference observable in the physical properties of the two preparations indicating, probably, that they were two entirely distinct compounds, was fully confirmed by an appeal to analysis. Theoretically, hydrate of chloral should contain 64.35 per cent. of chlorine. M. Personne found that the preparation he had made contained 63.79 per cent., whilst a sample of that made by M. Roussin yielded only 54.89 per cent., an amount agreeing with the formula above given. Following this indication, M. Personne endeavoured to ascertain by experiment whether the hydrate of chloral prepared by M. Roussin did, or did not, contain alcohol. The results were very satisfactory, distinctly proving the presence of this compound. Further, by combining anhydrous chloral and absolute alcohol in the proper proportions, M. Personne was enabled to prepare synthetically a substance having properties entirely similar to those of the supposed hydrate of chloral prepared by M. Roussin.

### THE PRESENCE OF HYDROCYANIC ACID IN TOBACCO SMOKE.

A reaction for indicating the presence of hydrocyanic acid was described in these columns some months back. We refer to that of M. Schœnbein, dependent on the blue colour produced in guaiacum paper soaked in solution of sulphate of copper. By the use of this paper M. VOGEL has apparently discovered that hydrocyanic acid is present in tobacco smoke. M. POGGIALE and MARTY, recognising the great interest attaching to such a question, and reflecting on the possibility of error by the use of Schœnbein's paper, have tested tobacco smoke by a variety of methods, and have succeeded in controverting the announcement made by M. Vogel, and in exposing the uselessness of the test employed. The products of the combustion of 200 grammes of tobacco were carefully passed through successive quantities of water, so as entirely to condense any hydrocyanic acid which might be evolved. The combustion was carried on slowly, and with regularity. Guaiacum paper, moistened with sulphate of copper, the test proposed by Schœnbein, was exposed above a portion of the liquid, and was instantly turned blue, the presence of hydrocyanic acid being supposititiously thereby indicated. To ascertain the adequacy of this test the authors submitted portions of the liquid to the various tests known to chemists, and of which they give details in their paper, and by the results of which they were enabled to arrive at the following conclusions:—

That tobacco smoke does not contain hydrocyanic acid.

That Schœnbein's reaction is not worthy of confidence.

### ACTION OF THE BILE ON SULPHATE OF QUININE.

The *Giornale di Medicina Militaire* has published an article concerning the action of the bile on sulphate of quinine. If

\* From the *Pharmaceutical Journal* for April.



a mixture of the two is made, sulphate of soda and glycocholate of quinine are produced with an excess of free glycocholic acid. Glycocholate of quinine is of a resinous appearance, is insoluble in cold water and dilute acids, soluble in ammonia and alcohol, difficultly soluble in potassa. From these facts the conclusion is inevitable that sulphate of quinine, on its passage from the stomach, is, to a great extent lost from a therapeutical point of view, in consequence of its insoluble combination with the elements of the bile.

#### ASSAY OF A PURE AMERICAN OPIUM.

Mr. W. PROCTOR, jun., publishes in the *American Journal of Pharmacy* the results of the assay of a sample of American opium from poppies, raised from foreign seed, and grown at Hancock, Vermont, by Mr. C. M. Robbins. The opium was obtained by scarifying the capsules in the Eastern manner, and the exuded juice collected and dried in the sun. No leaves, capsules, or other foreign matter was admixed, neither was there much moisture.

From an experiment on 100 grains the following results were obtained:—

Morphia . . . . .	15.75
Narcotina, impure . . . . .	2.00
Meconic acid . . . . .	5.25
Cloutchouc, fatty-matter and resin . . . . .	11.00
Insoluble residue (including 0.5 ash) . . . . .	22.00
Matter soluble in water, other than salts of morphia, narcotina, as gum, etc. . . . .	38.50
Water . . . . .	5.00

#### LIQUID PEPsin.

The *American Journal of Pharmacy* contains an article on the preparation of liquid pepsin, by Mr. E. SCHEFFER. Throughout his experiments the author employed finely chopped mucus membrane, dissected from fresh, well cleaned, pigs stomach. By maceration with water alone too much mucus was dissolved, so that the liquid became quite gelatinous, and did not clear itself. The author, therefore, macerated with water, hydrochloric acid and glycerine, mixed together, and obtained a preparation from which, on standing a few days, the mucus held in suspension was precipitated, and was entirely separable by filtration. The author ultimately adopted the following formula for the preparation of

#### Liquid Pepsin.

Six pounds mucous membrane of hog's stomach are macerated in a mixture of  
Four pounds glycerine,  
Four pints water, and  
Six ounces of pure hydrochloric acid  
For thirty-six hours, after which the mass is strained, the membrane macerated again with three pints of water for two or three hours, then strained, and this proceeding repeated with smaller quantities of water, until ten pints of liquid are obtained.

The resulting liquid becomes limpid after standing a few days, a precipitate of mucus forming, from which, by filtration, a clear, light, straw-coloured liquid is separated, possessing a faint and disagreeable odour. The author found that liquid pepsin thus prepared will dissolve one-and-a-half drachms of coagulated albumen, provided the temperature does not rise much above 105° F.

The author concluded from experiments made on the various preparations known under the name of "Wine of Pepsin," that such preparations do not contain any pepsin at all. Other experiments showed that one fluid ounce of liquid pepsin, prepared as above, would be equal in strength to 100 grains of Boudault's French pepsin, to 540 grains of

Houghton's dry pepsin, and to four-and-a-half fluid ounces of Hawley's liquid pepsin. The author found that neither time nor warmth caused the liquid pepsin to undergo decomposition, or lose its medical virtue. In order to render it a little more palatable, the addition of some aromatic syrup might be countenanced, though not that of wine or alcohol in any shape.

#### CANTHARIDAL COLLODION.

Mr. W. J. THOMPSON makes cantharidal collodion according to the following formula:—

Take of Cantharides, in fine powder, a troy ounce,  
Collodion cotton, q.s.  
Strong alcohol, q.s.  
Strong ether, q.s.

Moisten the cantharides with four fluid drachms of the alcohol, and pack it in a glass percolator of proper size arranged for displacement, with the lower end closed with a cork. Pour on the contents of the displacer four fluid drachms of the ether, and cover with an accurately fitting plate of glass. After twelve hours displace with a mixture of the alcohol and ether in equal proportions, until two fluid ounces are obtained, which set aside in a two ounce phial. Continue the displacements until one fluid ounce more has passed through; allow this to evaporate spontaneously, and dissolve the residue in the first quantity of two ounces; add to this six grains of collodion cotton, or a sufficient quantity to make the cantharidal collodion of the proper consistency. Agitate the mixture occasionally, until the cotton is dissolved.

SIDNEY W. RICH.

## Therapeutics.

#### NEW ANÆSTHETIC AGENT—METHYL-ETHYLIC ETHER.

ON the 14th ult., Dr. B. W. RICHARDSON, F.R.S., brought before the Medical Society of London the results of his recent experiments on the production of rapid general anæsthesia for short operations, and introduced a new anæsthetic compound, which promises to become a most valuable agent in surgery and dentistry. We are indebted to the *Lancet* for the following abstract of Dr. Richardson's important communication:—He began by explaining that, within the past two or three years, a practice had been followed of producing quick insensibility which should be followed by equally quick recovery. Two agents had been employed for this purpose: (a) nitrous oxide gas; (b) bichloride of methylene. Admitting that the principle of producing quick insensibility had a practical intention and usefulness, Dr. Richardson said he had an objection to the methods which, up to the present time, were adopted for carrying the principle into practice. His objections to nitrous oxide gas were as firm as ever. He held still that the employment of an agent which excluded all atmospheric air during inhalation, which produced the most perfect asphyxia, which required for its administration costly and troublesome apparatus, and which if administered beyond a given period, even for a few seconds, must of necessity kill, was a bad agent for anæsthetic administration—was, in fact, a rude and vulgar process, retrogressive in science. Respecting bichloride of methylene, though it was hard to speak against any application of a remedy which he (the author) had introduced, he must be candid and say that he was not favourably impressed with the application of bichloride for quick general anæsthesia. That it was marvellously rapid in its action was true, that it answered the end had in view was true, and that it had now been used for rapid inhala-



tion an immense number of times was also true; but these facts could not conceal the further and all-important fact that the bichloride of methylene belonged to a dangerous family of chemical substances, and could not therefore be played with without risk. It had been extolled as being safer than chloroform, and that was allowed, for, as it contained an equivalent of chlorine less than chloroform, it was materially safer. But the safety was relative, not absolute. Under these impressions the author was led recently to review experimentally the action of the whole of the more promising anæsthetic fluids and vapours, including chloride of methyl, bichloride of methylene, chloroform, amylene, hydride of methyl, ethylic ether, methylic ether, and some others, which were given on a table placed before the Society. The result was that he had decided in favour of methylic ether for rapid anæsthesia. The anæsthetic properties of methylic ether were first discovered by Dr. Richardson in 1867, and the substance has been reported upon by him in two reports to the British Association for the Advancement of Science. On the 20th of May, 1868, he inhaled it for the first time himself. Dr. Sedgwick and Mr. Peter Marshall administered it to him to complete insensibility. He was narcotised completely in one minute, was unconscious in seventy seconds, and recovered almost instantaneously without nausea, headache, or other unpleasant symptom. From that time the author has been in the habit of narcotising occasionally with methylic ether, and recently with marked success. The ether is made by digesting one part of pure methylic alcohol with two of strong sulphuric acid. The mixture is heated, and the methylic ether, which passes over as a gas, is subjected to frequent washings in a strong solution of potash. The ether remains as a gas even below zero; it has an ethereal odour; it is chemically an oxide of the radical methyl; and its vapour density is 23, taking hydrogen as unity. The strongest objection to methylic ether is that it is a gas; but, happily, that difficulty is to a large extent overcome, the gas being very soluble in various substances; water takes up 37 volumes of the gas, yielding an ethereal fluid of a very pleasant taste; pure ethylic ether and alcohol take up over 100 volumes, and chloroform and bichloride of methylene nearly as much. For practical purposes, the author prefers absolute ethylic ether of specific gravity 720, and boiling point of 92° Fahr. as the solvent. The ether is charged with the gas at a temperature of 32° Fahr., and the compound is at once bottled and firmly corked down. It should be kept for a time before being used, the process of keeping producing a comparatively stable compound. In using this compound, which he proposes to call methy-ethylic ether, the author at present employs the simple mouthpiece invented by Mr. Rendle, and made merely of leather. He is adding to this a reserve bag, in order to censure the ether. From one to two drachms may be put into the inhaler for quick narcotisation. Dr. Richardson next described cases in which the methylic ether had been administered to the human subject for the extraction of teeth. In eleven cases, the whole operation, from commencement of the inhalation to the complete recovery, was under three minutes; in several cases one minute was sufficient; while in two cases forty-five seconds sufficed. In no case was there spasm, syncope, or asphyxia during inhalation, or any after-nausea, and in all cases there was a semi-consciousness, so that the patients did what they were bade to do, remembered what had been done, and yet were not conscious of pain. The author next described the action of methyl-ethylic ether on the nervous centres, comparing it with chloroform and other anæsthetics containing chlorine. He showed that this ether produced no excitation of the nervous centres

which supply the vascular system, as chloroform does, and that, consequently, there was absence of muscular spasm, of contraction of blood-vessels, and of syncope from fatal contraction of the heart. When it was carried to the extent of arresting life in the inferior animals, it produced death by paralysing the organic nervous centres. This extreme result was preceded by convulsive action similar to that which is seen in death from hæmorrhage, the convulsion being due to the absence of arterialised blood in the muscles. So well, however, did the heart still retain its power, that in one case, in a lower warm-blooded animal, a guinea-pig, the respiration returned *spontaneously* in pure air, four minutes and forty-five seconds after it had ceased. No fact could more definitely speak in favour of the safety of the agent. In conclusion, the author said that as he had confined himself this time to rapid anæsthesia for short operations, his remarks must be taken as bearing on that subject only. He had introduced methyl-ethylic ether as the readiest and best agent he knew of for the purpose described. It was better than nitrous oxide gas, because it allowed air to be given with it, and did not asphyxiate. It was better than bichloride of methylene, because it did not produce muscular spasm and syncope. At the same time, he did not consider it as perfect, nor should he consider general anæsthesia perfected until he, or some other observer, should discover an agent that will destroy sensibility without interfering at all with organic muscular life, volitional power, or consciousness. Methylic ether approached this perfection, though it did not touch it, and it encouraged perseverance in experimental research. For these reasons it was worth the attention of the Society.

### Veterinary Notes.

BY W. HUNTING, M.R.C.V.S.

#### GLANDERS AND FARCY.

THESE two diseases, though by no means so common as a few years since, exist in stables of heavy horses to a greater extent than is generally imagined. In horses they generally run a slow course, but in man and other animals to which they are communicable, the course is rapid and fatal.

I believe these diseases never arise spontaneously; neither dirt, over work, bad ventilation, nor any other similar influence is sufficient to produce them. They depend upon a special poison, which must be derived from a diseased animal, either directly or indirectly. It is often difficult to trace the contamination; this is explained by the fact of the virus existing in the blood and discharges of an affected animal, by its retaining its vitality for a very long time, even though dried up or covered over, consequently, by its easy conveyance *unknown*.

Many persons, whose opinion is of great weight, believe that glanders and farcy, though, doubtless, spreading principally by contagion, may, under favourable circumstances, be spontaneously generated. For my part, I believe in no spontaneous generation. Every living germ must have had a similar parent. Contagious animal poisons are living germs, therefore, I hold that every contagious disease appears and spreads solely as the result of its special virus. If a disease is certainly contagious, it is certainly incapable of spontaneous origin. It is extremely important to fully appreciate whether a disease depends entirely on contagion or not; as, if it does, we can by restrictive laws effectually eradicate it, as was done with the Cattle Plague. Glanders and farcy are diseases of very little less importance than Cattle Plague. They are not speedily fatal, so do not pro-



duce such a noticeable money loss; but they are worse than it, as being communicable to man, in whom they almost invariably cause a painful and hideous death.

Glanders and farcy depend upon the same virus, probably, though each presents special local symptoms. In glanders the nasal chambers are the local seat of disease; in farcy, the lymphatic vessels. We will now very shortly consider the two separately, and first, glanders.

The most apparent symptom is a discharge from the nose of a somewhat thin and sticky matter. It generally issues from one nostril. A closer examination shows that the lining membrane of the nose is ulcerated in one or more spots, sometimes to such an extent as to perforate the septum.

We have, too, an induration of the glands inside the lower jaw, on the same side as the nasal discharge. The peculiarity of this swelling in glanders is, that it is circumscribed and fixed to the jawbone. In many simple cases, as strangles, we find enlarged glands and a discharge from the nose. Many cases of long standing—discharge from one nostril—are perfectly harmless, though not very amenable to treatment. On examining the lining membrane of the nose, if we find it pale or leaden coloured, we say the discharge is chronic, if very red, that it is recent.

If an animal has a discharge from the nose, swollen glands adhering to the bone, and ulcers on the nasal membrane, we may almost certainly say, "it is a case of glanders."

The previous history, if known, will help to decide; but the only positive proof is the capability of the nasal discharge to produce a similar disease in a healthy animal by inoculation. Such proof is seldom needed; it removes all doubts, however, if a valuable stud of horses is concerned, or in case of conflicting professional opinions.

We can, in some few cases of glanders, reduce the enlarged gland, decrease or temporarily stop the nasal discharge, in fact, nearly cure the case. Some cases are reported as cured, but we must receive such with doubt.

Should treatment be decided on, the nose should be frequently washed out by a syringe with an astringent and antiseptic solution, as permanganate of potass or carbolic acid. Feeding must be liberal, comprising beans. Drugs, the same as in cases of farcy. Still, considering the small chances of cure, and the great risk to human life, all well-marked cases should be at once killed.

In farcy, we have the enlarged glands, but instead of the ulcers and discharge from the nostrils we find small swellings in various parts of the body. They are on the course of the lymphatics, down the inside of the limbs, along the side of the flanks, and on the neck. They vary in size from a pea to a walnut, are first hard and painful, then present a softer and smoother surface, and, finally, discharge a thin purulent matter, or they may remain as small hard nodules. The advent of an attack is usually attended by lameness and febrile symptoms.

*Treatment.*—At once place the animal on good food, and give tonics. My practice with the swellings or "buds," as they are called, is to wait till they appear to contain matter, then lay them open and dress with strong carbolic acid. This treatment I have found so far successful as to quickly dry up and disperse the swellings. It is, however, no use attending to the buds unless the system is treated generally. Various drugs have been used; the old favourite was corrosive sublimate; it is now totally discarded. Sulphate of copper, once much vaunted, has given place to the diiodide of copper, which has a very beneficial action. Cantharides, introduced years ago by Mr. Vines, is still in good repute. Arsenic is used, so is a compound of arsenic and strychnia; they have many advocates.

I do not believe that any of these substances are specifics; their good effects being merely due to their tonic action. They seem more to keep down the disease than to destroy it, as cases which under treatment present no bad symptoms soon relapse if the medicine is discontinued, or the constitution weakened by over-work or bad feeding. The best way of giving medicine is as a powder, mixed with the food; giving balls is most unsafe to the operator.

The following forms are of about equal value:—

Bac Pimentæ pulv. ʒij.

Cupri Sulph. ʒss.

Zinci. Sulph. ʒss.

Canth. pulv. gr. v.

Or,

Cantharides pulv. gr. v.

Acid Arsen. pulv. gr. x.

Ferri Sulph. pulv. ʒij.

Or,

Gentianæ pulv. ʒij.

Canth. pulv. gr. v.

Cupri Diniodid. ʒss.

To be given once a day.

The reason we advise the destruction of a glandered patient, and not one with farcy, is, that when the buds are not discharging, and we have, by treatment, subdued the worst symptoms, the animal is useful for work and not dangerous as a centre of contagion.

Of course, great care is needed not to allow syringes, etc., used on a glandered or farcied animal to be used on a healthy one.

"Water Farcy" is a name given to a totally different and non-contagious affection; it is an almost obsolete term.

## Homœopathy.

### HOMŒOPATHY IN PARLIAMENT.

WITH reference to a few remarks under this heading which we made in our last article on Homœopathy, we have received the following letter, which we have pleasure in publishing:—

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—The liberality with which you have usually treated homœopathy, leads me to believe that you will allow me to offer a few strictures on your recent remarks. I am no apologist for the writers in the *Homœopathic Review*, for they lack neither the ability nor the spirit to defend themselves. My only object is to prevent those of your readers who do not see the *Review* from running away with erroneous impressions of the "preposterous" claims of homœopaths.

With all due deference, I submit that your parallel between religion and medicine does not hold good. Christianity claims to be a perfect emanation from the Divine, to which no jot or tittle is to be added, neither is anything to be taken away. Allopathy has no such pretensions. Of man, from beginning to end, it shares all his imperfections, and is modified by every advance in science, and by many fancies "baseless as the fabric of a vision." As a science, therapeutics has made the least progress of any of the sciences. How, then, can the imperfect work of man be compared with the perfect creation of God? Mahomedanism has had no influence on the principles of Christianity, but homœopathy has excited great influence upon the science of cure, as was admitted even by Sir B. Brodie, and its influence goes on increasing day by day.

Further; if homœopathic students are compelled to study both systems of medicine, is it too much to ask that allopathic students be also required to study both? If allopathic students are to be examined in one system only, let one also suffice for the homœopaths; but would not a study of both systems of cure tend to promote a wider range of thought and a more genial courtesy? Would it not be an advantage to the public also? Let homœopathy be inquired into, and if it be false it will disappear like the shadows of night before the rising sun; if there be any truth in it, the wheat will be freed from the chaff; and if it be the true science of healing, it will hasten to assume its royal dignity.



If homœopathy be true—and you admit that “the whole analogy of the universe is in favour of the theory” (*C. & D. Almanack*, p. 81)—give it fair play, for *magna est veritas, et prevalebit*!

Yours respectfully,

J. DUFFY.

Glossop Road, Sheffield,  
March 22nd, 1870.

The editors of the *Homœopathic Review* take a similar view to that which our correspondent advocates. In their last number they say, in the course of another article on Medical Reform, in which they reiterate their claim for a legal acknowledgment of their system of medicine:—

The *Chemist and Druggist* regards our claim as “preposterous,” adding that “it would be just as reasonable to propose that candidates for Holy Orders should be examined in the principles of Mohammedanism or Mormonism.” Such a comparison hardly admits of being treated seriously. It savours of the grossest ignorance, both of homœopathy and logic! The principles of religion are matters of Divine revelation; the principles of medicine are matters of scientific and empirical investigation. Any comparison between the two is, therefore, impossible. The necessity for exposing the fallacies of Mohammedanism does not exist in this country—there are no Mohammedans to convert. Pretty much the same may be said of Mormonism. Nevertheless, our clergy would be none the worse for having an intelligent knowledge of both systems of imposition. The relation in which homœopathy stands to medicine is quite another thing altogether.

And then follow arguments favourable to homœopathy generally. Now, it seems to us rather hard that we should have to provide logical nuts and crack them too, but evidently our analogy was not set forth with sufficient clearness. Perhaps, if we reverse the illustration, our critics will more readily see our meaning. It will be admitted that both religious and medical truth is always truth, as error is error, whether England, Turkey, or China be the region where it is promulgated or persecuted. Let us, then, for the purpose of the argument, compare Homœopathy to what the *Homœopathic Review* would call the true religion, and let Allopathy stand in the position of Mohammedanism, that being understood as the imposture. But in Turkey this imposture is regarded as truth, and is established by the State. Where would be the sense if the Sultan of Turkey, who openly and avowedly upholds the religion of the Koran, were to compel the ministers of that religion, to whom the course would be still more distasteful, to qualify themselves for their offices by studying the principles of the religion of other nations? This is surely a parallel case, and though we willingly admit that it would be a good thing for Mohammedan priests to study the principles of Christianity, we could only regard it as a preposterous demand if some handful of Christians in the Turkish empire were to claim such recognition of their belief as that which we have indicated. No doubt truth is great, and sooner or later will prevail, but under present circumstances the enunciation of this maxim is more like an argument against, than in favour of homœopathy.

#### CONTAMINATION.

It is not our province to reform the system, but merely to record the events of homœopathy; but in the present dearth of history we may be excused for referring to one point where many homœopathic practitioners seem to us to err. A student of orthodox medicine can hardly avoid a smile when he sees the advocates of homœopathy so exceedingly particular about the minutest possibility of a chance that their treatment may be altogether upset by some mere shade of contamination. Now, of course, it is always right to be as careful as possible in the preparation of medicines of any kind, but in the world we live in, with its heterogeneous combinations and its myriads of products, it is absolutely impossible to imagine that a medicine can be conveyed from the dispensary to the patient's stomach, to say nothing of what may have occurred before the chemist came into possession of it, without some sort of contamina-

tion. And this consideration, if such strict nicety be insisted on, at once puts the practical value of homœopathy altogether beyond the reach of test, although volumes may be written to prove its correctness as a theory. The proofs which homœopathsists so frequently adduce, where in other practice like is known to cure like, have all been arrived at independently of these precautions. Why, then, should not those who believe in the universal application to disease of the dogma of “*similia similibus curantur*,” rest their cause a little more courageously on that theory, and disentangle themselves from the awkward dilemmas into which their fancy may have led them.

## Photography.

#### THE EXPORT TRADE.

IT is doubtful whether photography *per se* can be considered as a science; its origin and progress were little more than the application of the laws of light, and of chemical discovery, which had long before prepared the way for it. But the application of these laws and facts has been so rapid as almost to outrun the most industrious chroniclers; and the outside public, instead of being called upon to comprehend its scientific basis, has contented itself with watching, and has watched its development as an art with an interest only underrated by the indifference which the modern accumulation of scientific wonders has induced. But to chemists photography, and all that concerns it, should have a special interest. Amateur and professional artists will continue, and will increase in numbers, as long as young men and maidens, old men and children, continue to make up our population, as long as affection and esteem, to say nothing of vanity, shall still be powerful motives to sway humanity, and as long as there shall remain beautiful scenes on earth, and men with souls capable of enjoying them. Our fellow-tradesmen abroad have been swift to appreciate the advantage of making the sale of photographic materials a department of their business, and so it happens that chemists and druggists' stores in India, Australia, Canada, and all our colonies, are the recognised depots for apparatus and chemicals. Calling a few evenings ago at the establishment of Mr. Cooke, of Hoxton, the well-known manufacturer of photographic materials, we were shown a handsome case which was just ready for shipment to Japan. In a space of about the size of a fair-sized ship's medicine chest were packed all the necessaries for a photographic outfit; and these, although of tender composition, were so neatly and skilfully arranged as to defy all probable contingencies of accident during the voyage. A camera closing into a very small space, three fine lenses, baths, plates, tripod stands, and a number of other appliances, with no mean collection of chemicals (for instance, there were at least four ounces of nitrate of silver), were all ready, and we may describe them as in blooming condition. A book of instructions is included in this case, so that with a set like this an amateur altogether unacquainted with the art can at once set to work, and may soon become an artist. It will surprise some of our readers who think that the practice of photography is somewhat expensive, to learn that the whole cost of this elaborate set is only £15, and that a set quite perfect, only not so comprehensive, can be had for little more than half that sum. The practice of a most interesting art, the results of which afford an infinite round of pleasure, can, therefore, be entered upon for scarcely more expense than many gentlemen spend on their cigars, and for far less than ladies need to set them up in music.



## NEGATIVES ON GROUND GLASS.

According to the *Photographisches Archiv* of Berlin, negatives on ground glass give very soft, pretty impressions. The glass must have a rather coarse grain, and the negative must be taken on the smooth side. This process is sold in America at high prices, under the name of the "Berlin Process."



## APPARITION RINGS.

THESE rings are the Easter novelty of the Stereoscopic Company. They have only been introduced a few days into London, and are a foreign invention, the cleverness of which is unquestionable. Without any necromantic tricks, an optical delusion, pure and simple, is produced. To all appearance a link is seen to traverse the whole length of a chain, but it does not fall off, and whence it comes or whither it goes are inexplicable mysteries. Terms to the trade are quoted on another page.

## ASHTON AND PARSON'S EXTRACT OF CHOCOLATE.

We have a special pleasure in calling the attention of the trade to this new cocoa extract, because we are informed that the proprietors intend to sell it to the public entirely through chemists. Messrs. Ashton and Parson will find their plan pay, and chemists may buy and sell their article with the utmost confidence, as it is not only a pure, but a very delicious preparation.

## BENZODYNE.

This article is now prominently before the public, and lest any chemist should happen, through the similarity of names, to confound Benzodyne, which is a medicine, with another popular article which is a glove cleaner, we have thought it well to mention the two in juxtaposition. Benzodyne is chiefly prepared from gum benzoin, and is recommended for stomach and chest complaints, coughs, etc. Messrs. Price and Co., of Lower Seymour-street, are wholesale agents.



*A Pharmaceutical Guide to the First and Second Examination.*  
By JOHN BARKER SMITH. London: John Churchill and Sons.

IN our last number we dismissed this book with a few words implying general disapprobation. A critical examination of the work has deepened the unfavourable impression we received on first turning over its pages. To the pharmaceutical student it will prove an *ignis fatuus*, rather than a trustworthy guide. In attempting to supply "that information which has hitherto been procured from several books," the author has produced a fantastic piece of patchwork, consisting of scraps of Latin Grammar, Arithmetic, *Materia Medica*, Botany, Chemistry, and Pharmacy.

After assuming, in almost the first paragraph in the book, that the student is already instructed in English grammar, the author, in his "Introduction to Latin Grammar," fills two pages with a detailed definition of the noun and verb. But as a compensation for this lengthy description, the adjectives, adjective pronouns, participles, adverbs, and interjections, are grouped together under the common name of "qualities," and disposed of in less than five lines. Except in the instance mentioned above, everywhere in this part of the book is lucidity and occasionally even accuracy

sacrificed to brevity. For instance, in one place we are told that *when not UUM or RUM*, is a sign of the Accusative case. Evidently space would not allow of the exception of nouns of the second declension in *er* which all make *rum* in the accusative singular. Again, speaking of the declension of adjectives, we are told that comparatives are declined like *tristes*, no mention being made of the variation of the genitive plural. Although every form of each declension is touched upon, one example only is given to each. Inconsistency and want of method is apparent throughout; a list of seventeen compounds of the verb *fero* is given, whilst only two of the compounds of *sum* are spoken of.

In the "Glossary of Botanical Terms," we find many terms that are rarely used; but we miss some of the commonest terms of descriptive botany. As an instance of the author's inconsistency, we may compare the spelling of "Acrogenes" with that of "Endogens" or "Exogens."

The chemical portion of the work cannot be too strongly condemned. The author has adopted the modern nomenclature, and speaks of "sodium chloride," "potassium tartrate," "magnesium carbonate," etc., but he consistently refuses to acknowledge the existence of calcium, and speaks of "lime carbonate," "lime chloride," "lime phosphate," etc. The metallic hydrates, the alcohols, the metallic oxides, chloroform, and ether, are placed under the general head of "salts." Such terms as "monads," "dyads," "triads," and "tetrads," are freely used, but the student is left to discover their meaning. Lead is included with the tetrads, but as it plays the part of a dyad in all its pharmaceutical compounds, the student may reasonably doubt the utility of the author's pedantic classification.

In many parts of the book the results of earnest work are apparent, but the author evidently lacks the precise knowledge needed in a teacher.

## LIST OF NEW BOOKS.

- Clapin's French Grammar. 2 Parts in 1 vol. 12mo., 8s. 6d., cloth.  
Davidson's Animal Kingdom. 12mo., 2s., cloth sewed.  
Doukin's Acoustics, Theoretical. Part I. Cr. Svo., 7s. 6s., cloth.  
Green's Handbook to Grammar of Greek Testament. Cr. Svo., 7s. 6d., cloth.  
Lefranc's Conjugating Dictionary of French Verbs. 12mo., 2s., cloth.  
Medical Register, 1870. Roy. Svo., 4s., cloth.  
Mier's Contributions to Botany. Vol. II. 4to., 36s., cloth.  
Nicholson's Zoology for Students. Vol. I.—Invertebrata. 7s. 6d., cloth.  
Orridge's Citizens of London and their Rulers, 1060—1867. 10s. 6d.  
Pettigrew's Handy-Book of Bees. 12mo., 4s. 6d., cloth.  
Robertson's Questions on Lockyer's Elementary Astronomy. 1s. 6d.  
Robinson's Alpine Flowers for English Gardens. Cr. Svo., 12s., cloth.  
Rolleston's Forms of Animal Life. Svo., 16s., cloth.  
Stanford's Geological Map of London. By J. Jordan. 5s.  
Stroeg's Translations from Catullus and Virgil. 12mo., 1s. 6d., cloth.  
Symon's Distribution of Rain over British Isles. 1869. Svo., 5s.  
Treherne's Treatise on the Bankruptcy Act, 1869. Cr. Svo., 10s.  
Tyson's The Cell Doctrine, its History, etc. Cr. Svo., 10s., cloth.  
Virgil's Eclogues and Georgics. Trans. by an Oxford Graduate. 2s. 6d.  
Vogel's Diseases of Children. Trans. by Raphael. Svo., 22s., cloth.  
Winchell's Sketches of Nature. Illustrated. Cr. Svo., 9s., cloth.  
Wright and Shadwell's Golden Treasury of Greek Prose. 4s. 6d., cloth.  
Wood's Common British Moths. Illustrated. 12mo., 3s. 6d., cloth.  
Wood's Dispensatory of the United States of America. 50s.

## Corner for Students.

CONDUCTED BY RICHARD J. MOSS.

The chemical formulæ employed in this section are based upon the new system of atomic weights, unless the use of the older system is specially indicated. In the *British Pharmacopæia* the symbols corresponding to those adopted here are printed in heavy Clarendon type. The new editions of Fownes's *Manual of Chemistry*, and Attfield's *Chemistry: General, Medical, and Pharmaceutical*, supply the data required for calculations, and are recommended as text-books.

## QUESTIONS.

## First Division.

I. FERRI PHOSPHAS, B.P.—Express symbolically the reactions involved in the preparation of this substance by the officinal process. State why sodium acetate is employed, and calculate the weight in ounces of the theoretical product.

II. LIQUOR CHLORI, B.P.—What percentage of the chlorine produced in the officinal process for preparing this solution is absorbed in saturating the 30 ounces of distilled water?

III. QUALITATIVE ANALYSIS.—A solid crystalline substance, free from organic matter, dissolves in water; its solution does not give a precipitate with silver nitrate, hydrochloric acid, hydrogen monosulphide, ammonia, or



ammonium sulphide. It gives a precipitate with ammonium carbonate, which, when dissolved in acetic acid, gives a yellow precipitate on the addition of potassium chromate. What metal is present, and what acids are absent?

When a portion of the solid was heated with strong sulphuric acid and copper filings, red fumes appeared. What acid is present?

IV. ALCOHOL.—An alcohol contains in 100 parts 39.13 of carbon, 8.7 of hydrogen, and 52.17 of oxygen; what is it? Express symbolically the reaction which takes place when it is mixed with potassium hydrate, and gently heated.

V. SULPHUROUS AND HYPOSULPHUROUS ACIDS.—What are the principal properties of these acids and their salts? How may they be detected in a solution?

#### Second Division.

I. HYDRARGYRI PERCHLORIDUM, B.P.—The aqueous solution of this substance "gives a yellow precipitate with caustic potash, a white precipitate with ammonia, and a curdy white precipitate with nitrate of silver." Give the names of these precipitates, also equations representing the reactions.

II. OZONE.—Give some account of the methods of preparing ozone, and mention its principal properties.

III. ATTRACTION.—What are the principal points of difference between the attractions of gravitation, cohesion, and chemical attraction?

IV. GASES.—Ammonia, oxygen, and marsh gas are each subjected to a series of electric sparks; what changes take place?

V. SPECIFIC GRAVITY.—If a piece of wood having a sp. gr. of .325, and weighing one pound, is placed floating on water, what weight (in pounds) would be required to submerge it?

#### ANSWERS.

##### First Division.

I. ACIDUM HYDROCYANICUM DILUTUM, B.P.—The quantity of this acid employed was 8.282 fluid drachms.

By adding potassium hydrate to dilute hydrocyanic acid, potassium cyanide is produced; when this solution is treated with a mixed solution of ferrous and ferric chlorides, the result is a precipitate of ferric ferrocyanide, thus:—

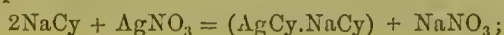


Hydrochloric acid is added to insure the complete separation of the ferric ferrocyanide, which is precipitated in combination with 18 molecules of water; in this state its molecular weight is 1184; this weight in grains requires for its production 486 grains of hydrocyanic acid ( $27 \times 18 = 486$ ), therefore the weight of acid required to produce 22 grains is found by the proportion—

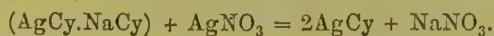
$$1184 : 22 = 486 : x \therefore x = 9.0304.$$

Now as the sp. gr. of the official acid is .997, one fluid drachm of it weighs ( $54.68 \times .997 =$ ) 54.516 grains; and as 2 per cent. of this solution, or 1.0903 grain is real acid, it follows that 9.0304 grains of the latter are contained in  $\left(\frac{9.0304}{1.0903} =\right)$  8.282 fluid drachms of the official acid.

II. VOLUMETRIC SOLUTION OF NITRATE OF SILVER, B.P.—The reactions which take place when this solution is used for testing hydrocyanic acid (as sodium cyanide) may be thus represented—



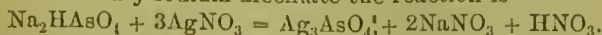
this reaction is complete when a permanent precipitate begins to form, thus:—



In testing potassium bromide the reaction is as follows:—



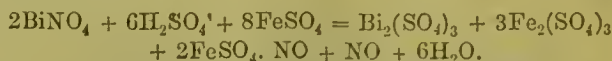
And with dry sodium arseniate the reaction is—



To recover silver nitrate from the products of these reactions they may be treated with hydrochloric acid, the precipitate collected washed and dried, mixed with twice its weight of a mixture of equal parts of anhydrous potassium and sodium carbonates, and this mixture heated in a clay crucible until it becomes liquid. The metallic silver thus produced is converted into nitrate by dissolving it in nitric

acid, evaporating to dryness, and gently fusing the residue from the aqueous solution of which crystals of the salt may be obtained.

III. BISMUTHI SUBNITRAS, B.P.—The black colour produced when a sulphuric acid solution of this salt is treated with ferrous sulphate, is due to the formation of a compound of ferrous sulphate and nitrogen dioxide. The following equation represents this reaction:—



IV. QUALITATIVE ANALYSIS.—The precipitate obtained from ammonium carbonate may be examined for barium, strontium, and calcium, as follows:—After washing it well, dissolve it in acetic acid, divide the solution into two portions. To one portion add calcium sulphate; an immediate precipitate indicates the presence of barium; a precipitate after the lapse of some time, strontium; and if no precipitate appears after some time has elapsed, and the solution has been repeatedly agitated, barium and strontium are absent; and if the second portion of the solution gives a precipitate on the addition of ammonium oxalate, calcium was the only metal present. If barium is present, add to the second portion of the solution potassium chromate, filter, and to the filtrate add ammonia in excess and ammonium carbonate, then warm the solution; if no precipitate is produced, strontium and calcium are absent. If a precipitate is produced, wash it and dissolve it in acetic acid, filter if necessary, and to the clear solution add potassium sulphate, which will not precipitate calcium; but if strontium is present, a precipitate will appear after the lapse of some time. If strontium is present, add a few drops of dilute sulphuric acid, filter after one or two hours, and to the filtrate (or to the acetic acid solution if strontium is absent) add ammonia in excess and ammonium oxalate, which will cause a precipitate with calcium if it is present. If strontium was found in examining the first portion of the solution, add dilute sulphuric acid, filter, and examine the filtrate for calcium as before.

V. SULPHURIC ACID.—This acid in its most concentrated form is a heavy colourless fluid, a definite compound of 80 parts of sulphuric oxide with 18 parts of water. It has a sp. gr. of about 1.85, solidifies at a temperature of  $-18^\circ\text{F}$ ., boils at  $620^\circ\text{F}$ ., and may be distilled without decomposition. At temperatures below its boiling point, it displaces all other acids from their combinations, but at higher temperatures it is displaced by the non-volatile acids. Sulphuric acid is bivalent, and forms with univalent metals acid and normal salts. Barium and lead sulphates are insoluble in water; strontium and calcium sulphates are nearly insoluble; all other sulphates are soluble in water. They are all insoluble in alcohol. The solutions of the normal sulphates of the alkalies, of calcium, magnesium, manganese, and silver, are neutral to test-paper; the solutions of all other normal sulphates and the acid sulphates of the alkalies are acid to test-paper. The insoluble sulphates and those of the alkali metals are not decomposed when heated to redness; all other sulphates are decomposed by heat, those of zinc, cadmium, nickel, cobalt, copper, and silver, requiring a high temperature. When an insoluble sulphate is fused with an alkaline carbonate, a soluble alkaline sulphate is produced, along with a carbonate or an oxide of the other metal.

Free sulphuric acid may be detected in the presence of a sulphate by heating the liquid under examination with a small quantity of cane sugar, and evaporating the mixture to dryness at  $212^\circ\text{F}$ .; if a black residue remains, free sulphuric acid was present.

#### Second Division.

I. SODÆ ARSENIAS, B.P., AND FERRI ARSENIAS, B.P.—The weights of each of these substances that should be employed in order to have quantities containing .025 of a grain of arsenicum, are, .104 of a grain of the former, and .743 of a grain of the latter.

The molecular weight of the official sodium arseniate is 312, one molecule contains one atom of arsenicum, the atomic weight of which is 75; accordingly the weight of the salt that contains .025 of a grain of arsenicum is found by the proportion,

$$75 : .025 = 312 : x \therefore x = .104.$$



The molecular weight of the officinal ferrous arseniate is 446, and one molecule of it contains two atoms (150) of arsenicum, so that the required weight is ascertained by the following proportion:—

$$150 : .025 = 446 : x \therefore x = .074.$$

II. ZINCI CHLORIDUM, B.P.—The fact that the aqueous solution of this substance gives a white precipitate with ammonium sulphide, indicates the absence of lead, as its sulphide is black. If arsenic, copper, or lead was present, a precipitate would be produced on the addition of hydrogen monosulphide to the acid solution of the salt. Barium chloride would give a precipitate with sulphuric acid or sulphate, and ammonium oxalate would cause calcium to be precipitated if it was present. The aqueous solution of this salt "is not tinged blue by the yellow or red prussiate of potash," therefore ferric and ferrous salts are absent. The precipitate produced by ammonia would not be entirely soluble in an excess of the reagent if magnesium or aluminum was present.

III. ACIDS.—Dilute solutions of hydrochloric, sulphuric, and nitric acids, may be distinguished from one another as follows:—Add to each of the solutions a drop of a solution of silver nitrate, a precipitate of silver chloride will be produced in the hydrochloric acid. To each of the remaining acids add a few drops of a solution of barium nitrate, the nitric acid will remain unaltered, whilst a precipitate of barium sulphate will be produced in the sulphuric acid solution. To confirm the presence of nitric acid in the remaining solution, add a few crystals of ferrous sulphate and some strong sulphuric acid, a brown colour will be imparted to the liquid surrounding the crystals.

IV. LIGHT.—The conditions necessary for the production of light in chemical combination are a high temperature and the presence of a solid body, or a vapour having a high density. The flame of a Bunsen gas burner, for example, is luminous when the gas is burned without previous admixture with air, because some of the carbon of the gas escaping oxidation, is intensely heated, and thus rendered incandescent; but if the gas is mixed with sufficient air to oxidise the carbon, the flame is no longer luminous, because solid matter is absent, and the vapour densities of the gaseous products are low. Metallic arsenic, which has a high vapour density, when burned in a stream of oxygen, produces an intense white light, although both the metal itself and the arsenious oxide produced are gaseous at the temperature of the flame.

The light and heat emitted by burning bodies do not bear any proportion to each other. The heat is due solely to chemical action, and the light is dependent on a variety of circumstances which may vary considerably without involving a change of temperature.

V. SPECIFIC GRAVITY.—The block of coal weighs 1925.616 pounds. The weight of water displaced by the 35 grains of coal is  $(500 + 35 - 306.6 =) 228.4$  grains; therefore, 28.4 pounds of water occupy the same space as 35 pounds of coal; but 25 cubic feet of water weigh  $(62.5 \times 25 =) 1562.5$  pounds, therefore the weight of 25 cubic feet of coal is found by the following proportion:—

$$28.4 : 1562.5 = 35 : x \therefore x = 1925.616.$$

#### PRIZES.

The First Prize for the best answers to the questions of the First Division published in our last number has been awarded to

A. C. MAYBURY (Otho), 41, Sloane-square, S.W.

The Second Prize for the best answers to the questions of the Second Division has been awarded to

JOSEPH H. WATSON, Crown-street, Halifax.

#### Marks awarded for Answers.

	First Division.						
	I.	II.	III.	IV.	V.	E.	Total.
Otho (1st prize)	7	7	6	7	5	2	34
A. Fraser	8	7	5	6	2	3	31
J. S. E.	2	6	5	6	7	3	29
J. W. Evans	4	7	5	5	6	2	29
J. W.	2	7	5	6	5	3	28
W. Maddocks	2	7	3	6	7	2	27
J. Young	2	7	3	5	6	3	26
A. E. I.	2	7	6	4	4	2	25
T. T.	2	7	2	4	6	1	22
S. T. Savers	2	6	4	3	4	1	20
A. B. Fletcher	2	4	3	4	4	2	19

#### Second Division.

	I.	II.	III.	IV.	V.	E.	Total.
J. H. Watson (2nd prize)	5	6	5	7	4	3	30
F. H.	5	5	5	7	3	3	28
J. C. Thresh	5	6	4	3	6	3	27
W. B.	5	1	4	6	5	2	23
Non Nobis	4	4	5	6	2	2	23
J. S. D.	5	5	4	7	0	1	22
R. L.	5	4	5	4	1	2	21
G. Spiers	2	3	4	8	3	1	21
X. Y. Z.	5	5	1	4	5	1	21
G. H.	5	6	5	—	3	1	20
J. Overton	4	3	3	1	5	3	19
N. W. H.	5	3	4	5	0	2	19
Nillie Sercl	3	3	6	0	3	2	17
Cupis Discero	5	5	5	0	0	1	16
J. R.	5	3	3	2	0	2	15
Josephus	5	2	4	1	1	2	15

#### TO CORRESPONDENTS.

\* \* All questions forwarded to us for publication in this "Corner for Students" should be accompanied by the answers which the propounders believe to be correct. Communications should include the names and addresses of the writers; those which reach us after the first day of the month will be disregarded.

Prizes.—The students to whom prizes are awarded, are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Ambulator.—Your answers arrived too late to be examined. We received them on the 9th of April, and the first of the month is the latest period we can give.

A. Fraser.—V. Your remarks about the sulphates are confined to their uses, and not their properties. Almost any acid would give the reaction by which you propose to detect free sulphuric acid in the presence of a sulphate.

J. S. E.—I. Ferric ferrocyanide is highly hygroscopic; it is not precipitated in the anhydrous state.

J. W. Evans.—I. You should have taken the specific gravity of the solution into consideration before calculating the percentage.

W. Maddocks.—III. Your equation represents the production of an oxide of bismuth that is not known to exist.

A. E. I.—V. Almost any free acid, if present in sufficient quantity, would cause effervescence with a soluble carbonate. A small quantity of sulphuric acid would not have this effect.

T. T.—III. In trying the experiment you appear to have employed too large a quantity of the bismuth salt; very little is sufficient to show the reaction.

A. B. Fletcher.—II. Silver chloride does not dissolve in nitric acid. III. Bismuth sulphate is not converted into an oxysulphate in the presence of an excess of acid.

F. H.—You omitted to send your address.

J. C. Thresh.—You were the only student who sent us a correct answer to Question V.

R. L.—We do not require the calculations in detail; you may take the printed answers as a model. Our "Corner" is free to all students who are connected with the trade represented by this journal.

G. Spiers.—I. You overlook the four atoms of oxygen in the sodium arseniate in calculating its molecular weight.

X. Y. Z.—Please send us your real name and address in future.

J. Overton.—I. You adopt a curious method of calculation.

N. W. H.—II. Ammonium oxalate precipitates barium from concentrated solutions only. Silver could not be present in an aqueous solution of zinc chloride, as argentic chloride is insoluble in water.

Nillie Sercl.—I. Your figures are correct, but you omitted decimal points.

Cupis Discere.—IV. The presence of oxygen is not always necessary.

Several metals burn in chlorine, for example, with the emission of light.

J. R.—V. If your result was correct, the block of coal, supposing it to be of the worst quality, would be worth about £300. To compound the prescription, you may mix the four first ingredients, say in the order in which they are given, then add the fifth dissolved in a little distilled water with the hydrochloric acid, finally half a pint of the solution of mag. sulph. O is an abbreviation for octarius, a pint.

#### Books offered as First Prizes.

Attfield's Chemistry: General, Medical, and Pharmaceutical. (Van Voorst.)

Brooke's Elements of Natural Philosophy. (Churchill.)

Conington's Handbook of Chemical Analysis; with Tables of Qualitative Analysis adapted to the same. (Longmans.)

Eliot and Storer's Manual of Inorganic Chemistry. (Van Voorst.)

Fownes's Manual of Elementary Chemistry. (Churchill.)

Fresenius's Qualitative Analysis. (Churchill.)

Galloway's Qualitative Analysis. (Churchill.)

Ganot and Atkinson's Elementary Treatise on Physics. (Longmans.)

Garrod's Materia Medica; with Modern Chemical Notation. (Walton.)

Noad's Chemical Analysis, Qualitative and Quantitative. (Roeve.)

Northcote and Church's Qualitative Analysis. (Van Voorst.)

Odling's Outlines of Chemistry. (Longmans.)

Royle and Headland's Materia Medica. (Churchill.)

Williamson's Chemistry for Students. (Clarendon Press.)

[Any other scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.]

#### Books offered as Second Prizes.

Barth's Introduction to Scientific Chemistry. (Groombridge.)

Bloxam's Laboratory Teaching. (Churchill.)

Church's Guide for Students in Agricultural Chemistry. (Van Voorst.)

Galloway's First Step in Chemistry. (Churchill.)

Gill's Chemistry for Schools. (Walton.)

Hofmann's Introduction to Modern Chemistry. (Walton.)

Huxley's Lessons in Elementary Physiology. (Macmillan.)

Oliver's Lessons in Elementary Botany. (Macmillan.)

Orme's Introduction to the Science of Heat. (Groombridge.)

Potts's Elements of Euclid. School Edition. (Longmans.)

Roscoe's Lessons in Elementary Chemistry. (Macmillan.)

Wormell's Elementary Course of Mechanics. (Groombridge.)

Wurtz's History of Chemical Theory. Translated by Watts. (Macmillan.)

[Any other scientific book which is sold for about five shillings may be taken as a second prize.]





## BRITISH PHARMACEUTICAL CONFERENCE, 1870.

A MEETING of the chemists and druggists of Liverpool and its neighbourhood was held on Wednesday, the 9th ult., to consider the arrangements to be made for the forthcoming meeting of the British Pharmaceutical Conference. The meeting was called by circular, and was well attended.

Mr. ABRAHAM, who was unanimously elected Chairman, gave an account of the origin and history of the Conference. He urged its claims on their hearty support, as tending to improve pharmacy, both in its scientific, practical, and social aspects. He explained the objects of the meeting, which was to elect a Local Committee.

Mr. ROBINSON said that Liverpool should not be behind other towns in the reception which it gave to the Conference, considering the large number of chemists carrying on business in it.

A general conversation followed, in which the general opinion was that there should be a dinner, an excursion and an exhibition, and that about £500 would be required.

Mr. J. M. BUCK moved that a committee be appointed consisting of six members of the Council of the Chemists' Association, with twelve members to be elected now, and these to have power to increase their number to twenty-four. That the Local Vice-President, the two Local Secretaries, and Mr. Robinson, as member of the General Committee, be ex-officio members of the Committee. Anyone elected a member of the Committee, and not signifying his acceptance of the office, his election to be void, and his place to be supplied by the Committee.

Mr. MURPHY seconded the motion, which was carried unanimously.

The meeting then proceeded to the election of the Committee. The following is a list of the Committee as far as at present appointed:—

*Ex-officio Members.*

Mr. J. Abraham.	Mr. J. Dutton.
„ E. Davies, F.C.S.	„ J. F. Robinson.

Mr. H. S. Alpase.	Mr. R. Lathbury.
„ J. M. Brick.	„ A. H. Mason.
„ G. Barber.	„ M. Murphy.
„ H. Coupland.	„ J. Pendlebury.
„ T. Dod.	„ A. Redford.
„ E. Evans, sen.	„ J. Shaw.
„ A. H. Kingston.	„ C. Sharp.
„ A. T. Horton.	„ R. Summer.
„ W. Jarvis.	„ J. Thompson.
„ C. Jones.	„ J. A. Turner.
„ S. Johnson.	„ J. Woodcock.

At a meeting of the Local Committee subsequently held, the following officers were appointed:—

Mr. Abraham, <i>Chairman.</i>	Mr. Davies, <i>Secretary.</i>
„ Summer, <i>Vice-Chairman.</i>	„ J. Shaw, <i>Treasurer.</i>

## LONDON CHEMISTS' ASSOCIATION.

On Thursday, March 10th, Mr. Porter in the chair, Mr. Brown read a paper on the "Ultimate Analysis of Plants," being the sequel to his former paper on the "Proximate of Plants." After a few introductory remarks, plants were divided into their organic and inorganic elements; qualitative tests were given for the former, and the latter examined in the usual way. Having noticed the occurrence of Raphides, siliceous skeletons, and abnormal and unusual substances, and referred to the tendency of substances of high chemical formula to decompose into simpler forms, Mr. Brown then passed on to the second part of his paper, on quantitative analysis applied to special parts of plants. After urging purity in everything used in this analysis, he noticed the different methods of reduction and estimation, their special faults and sources of error, and the modes of constructing empirical formulæ. He concluded by showing how

such analyses have led to the artificial formation of many organic substances, as acetic acid, alcohol, alizarine, and valerianic acid, the production of the latter being illustrated by the processes for making the valerianates of the Pharmacopœia. He said it was impossible to tell where such synthesis would end, probably not until morphia and quinine were made. He spoke of what he termed a "slaughter of the innocents," referring especially to the paper of Dr. Flückiger on buxine, which showed that the principle was common to pariera, bebeeru, and cinchona. In conclusion, he condemned some of the Pharmacopœia preparations as unsatisfactory.

The CHAIRMAN, in commencing the discussion, made some remarks upon the isomerism of some of the essential oils and protein compounds.

Mr. BEYNON referred to the latter portion of the author's paper, in which he stated that a similar principle existed in many plants, and confirmed the looseness of the Pharmacopœia description of sulphate of bebeerin, which had a definite formula assigned to it, although the product obtained was but an acid extract, containing really only a small quantity of the proposed salt.

Mr. BROWNEN, in replying, referred to a remarkable case in which tincture of quassia lost its bitterness. He said that the differences in isomeric compounds were accounted for by the grouping of the elements, and he also remarked that pariera, like nectandra, gave a better product when extracted with acids.

On Thursday, March 17th, the President in the chair, a very interesting paper was read on "Oleography," by Mr. Jessop. After alluding to the researches of Professor Tomlinson on the figures formed by different liquids when allowed to fall upon or into other fluids, he said that Mr. Tomlinson had informed him that he did not think much of oleography; that is, of printing by means of oil, the results being unsatisfactory. Mr. Jessop said that he had confined himself to the title of his paper, and he proceeded to explain his mode of taking oleographs, noticing the time required for the several oils to set into the most perfect and characteristic patterns. His paper was illustrated by a large number of prints he had taken, which were exceedingly well done, some being very beautiful; he also showed oleographs at different periods of time. A remarkable fact, which had hitherto been misinterpreted, was that the dark lines on the oleographs were the parts with which the oil had come in contact; other experimenters said that such parts were not coloured. He could scarcely explain such a phenomenon, but thought that the extremely small quantity of oil did not close up the pores in the paper, like water did by causing it to swell, and that the ink found its way in there, and could not be subsequently washed out.

Mr. PORTER inquired if Mr. Jessop had experimented upon the different classes of oils to see whether he got figures characteristic of a class.

Mr. Jessop said that he had done so, but obtained no results that could be deemed satisfactory; however, he hoped to experiment further upon that matter. The fixed and essential oils certainly behaved very differently; the fixed oils, as might be imagined, as a rule, spread comparatively slow over the surface of water, but the essential oils dashed over the surface so rapidly, that it was almost impossible to obtain oleographs of some of them.

After a further discussion on the application of oleography to practical purposes, as the making of paper-hangings, etc., Mr. Beynon remarked that he did not think it could be so applied, as, in whatever way the colour in the print was fixed, the oil seemed to spread slowly but easily over it.

The following question was taken from the *Note Box*:—"What is the best method of making creosote pills?" The Secretary said that he had never had much difficulty in making creosote or essential oils into pills; he thought that soap, wax, magnesia, etc., were the worst excipients for the purpose. He had been in the habit of using a preparation somewhat similar to that proposed by Mr. S. B. Turney, of Plymouth, in the January number of the *Pharmaceutical Journal*, which was a preparation of tragacanth and glycerine. He had followed Mr. Turney's plan exactly on several occasions, and found that the proportion he gave for making creosote pills answered capitally; it was also the best excipient he knew of for making pills containing



quinine, metallic salts, etc. He said that in some cases where a few drops of oil were ordered in pills, he had been in the habit of making the oil into an emulsion with a drop or two of mucilage first, and found that in making up such the oiliness was completely removed.

Mr. JESSOP remarked that a sugar globule, weighing about three grains, such as used by the homœopathist, would absorb one drop of creosote or any essential oil, and thought that it would be a good way of administering such.

On Thursday, March 24th, Mr. Jessop in the chair, a paper on "Chloroform," was read by Mr. Pickering. He first entered upon its manufacture, giving and explaining the reactions that occur. He then pointed out what impurities might be present in it, and the means of detecting them. In speaking of the purification of chloroform by sulphuric acid, he said, that although the use of the acid was condemned, he did not know of any better means of purifying it. He did not think that frequent washing with water and re-distillation would do so; in fact, the acid purified it completely; and Dr. Redwood had shown that if pure sulphuric acid was used, no decomposition took place, even under the most adverse circumstances. He advised chemists to be particular, nevertheless, to keep their chloroform in a cool, dark place. Mr. Pickering made some remarks upon the use of chloroform for anæsthesia. He thought that impure chloroform had been the cause of most of the deaths that had ensued. Other anæsthetics had been proposed and used lately, but chloroform, fulfilling as it does all the requirements of an anæsthetic, was the best yet known.

Mr. JEWELL disagreed with the author of the paper as to impure chloroform having caused death. The habit of the patient and his condition at the time ought to be considered before administering chloroform at all. Much impure chloroform must have been used he thought, and if such was the case more deaths would certainly have taken place; besides, to contradict such a statement, it was found that patients had generally died long before even a moderate dose had been given them. There was some discussion upon other anæsthetic agents, nitrous oxide, etc., and mixed anæsthetics.

Mr. BLETSOE made some remarks upon the preparation of chloroform in the Pharmacopœia. He thought that the chloroform liniment was an elegant preparation, but prescribers so frequently ordered it in combination with spirituous liniments, that the original character of the liniment was altered. Mr. Bletsoe introduced the question:—"What should be used for chloric ether?" Several members were of opinion that spirit of chloroform should be used.

Mr. BEYNON said that the question had been discussed at a previous meeting, when it was decided that a stronger solution of chloroform was as a rule intended; besides, why was there a form for a stronger solution in the Pharmacopœia? viz., the compound tincture of chloroform, except to represent what was previously understood to be the usual strength of the so-called chloric ether.

Mr. BLETSOE said that the compound tincture of chloroform did not make nice-looking mixtures; and made some further remarks upon the solubility of the chloroform preparations in different vehicles.

Mr. BEYNON said that he thought spirit of chloroform suitable in any proportions, like Duncan and Flockhart's chloric ether, which seemed to be merely spirit and chloroform distilled together, by which was probably formed a more soluble and lower chlorine compound than chloroform. This, as he knew, made a great difference in the solubility of the preparation; they were more soluble, also, the longer they had been mixed. Solutions of salts in mixtures precipitated the chloroform, and the waters of essential oil and camphor water would not absorb so much chloroform as plain water; as a rule, he found that by the addition of small quantities at a time and shaking, two drachms of chloric ether (1 in 10) or compound tincture, would dissolve in ordinary mixtures; if four drachms of either be added to a mixture, he found that the chloroform in the compound tincture did not separate in large globules as it did in an ordinary solution in spirit.

It was announced that at the succeeding meetings of the Association, discussion would take place upon the different classes of preparations in the Pharmacopœia.

## MANCHESTER CHEMISTS' AND DRUGGISTS' ASSOCIATION.

THE last ordinary monthly meeting of the present session was held in the Memorial Hall on Friday evening, April 1st; Mr. Hampson in the chair.

The CHAIRMAN announced that a room had been engaged in Mitre Buildings, Cathedral Gates, which it was intended to open on Tuesday and Friday evenings from six to ten for purposes of study and reference. Students wishing at other times to refer to the collection of *Materia Medica* specimens, etc., must apply for the keys to Mr. Woolley, 69, Market-street, or to Mr. Benger, 1, Market-place. Contributions of books, etc., suitable for the library were earnestly solicited.

The HONORARY SECRETARY announced a donation from Mr. T. Hyde Hills (John Bell and Co., London) of an artist's proof engraving of the late Mr. Jacob Bell, from the picture by Sir Edwin Landseer, and smaller engravings of Dr. Pereira and John Bell, accompanied by a letter conveying Mr. Hills' good wishes for the success of the Association.\*

A vote of thanks, proposed by Mr. Woolley, and seconded by Mr. Morton (Ramsbottom) was carried with acclamation.

Mr. WATERHOUSE (Ashton), after expressing his fears that a really useful library could not be formed by the unsystematic donations of members, proposed—

"That a special library fund of £100 be raised, and that a circular be at once issued soliciting the aid of members and their friends."

The resolution was seconded by Mr. Woolley and carried unanimously, four gentlemen, viz., Mr. Pritchard (Charlton-road), Mr. Waterhouse (Ashton), Mr. Brookes (Shudehill), and Mr. Hayward (Deansgate), immediately promising donations of five guineas each to the fund.

The SECRETARY (Mr. D. B. Benger) then showed and explained a number of experiments illustrating the chemical action of light. Amongst others, photographs of ferns, etc., were printed by the light of burning magnesium; glass bulbs, containing a mixture of chlorine and hydrogen, were shown to be unaffected by the yellow and lower rays of the spectrum, whilst the blue and more refrangible rays caused them to explode by the instantaneous production of hydrochloric acid gas.

Mr. J. T. SLUGG, F.R.A.S., then read an interesting and amusing paper on "Triplicity," illustrating by innumerable instances the tendency that exists in nature, and human nature, to group objects, words, sentences, etc., in "threes."

Mr. BOSTOCK, and other speakers, urged the associates to employ their spare time during the summer in collecting a good Herbarium for the Association.

The meeting was well attended.

## THE SHEFFIELD PHARMACEUTICAL AND CHEMICAL ASSOCIATION.

THE second General Monthly Meeting of this Association was held in the Rooms, Music Hall, on Wednesday evening, March 9, the President, Mr. E. Wilson, in the chair. The chief feature of the evening's proceedings was a lecture by Mr. A. H. Allen, F.C.S., Lecturer at the Sheffield School of Medicine, the subject being "Disinfectants." Mr. Allen said that modern medical science had proved that infectious diseases, such as cholera and typhus fever, owed their origin to the presence of minute germs or organised cells, which multiplied with extreme rapidity under favourable conditions. These germs were solid, and probably acted in a similar manner to the yeast plant in presence of sugar or bread. In disinfecting, therefore, we should keep in view the necessity of destroying the deadly germs, besides simply getting rid of a disagreeable smell. There were some substances, such as chloride of lime, which acted chiefly upon smells, and were little better than deodorisers, unless used in large excess; while others, like carbolic acid, were real antiseptics, killing the germs, and arresting all putrefaction, but exerting little or no action upon the smells. In choosing a disinfectant, it was necessary to be guided to a certain extent by circumstances, but on no account to use two disinfectants together, which would mutually destroy each other's action, such for instance as chloride of lime and

\* Mr. Hills has since forwarded to the Secretary a donation of five guineas to the Special Library Fund.



sulphite of limo and magnesia (McDougall's disinfecting powder). Mr. Allen concluded by exhibiting some of Dr. Tyndall's beautiful experiments upon the dust of the air, proving the motes visible in a strong light to consist of organic matter, capable of removal by filtering the air through cotton wool, or passing it through a red-hot tube.

Mr. Dobb proposed, and Mr. Ward seconded, that a vote of thanks be awarded to Mr. Allen for his interesting lecture, and the motion was carried unanimously.

The minutes of the last meeting were read and confirmed.

Messrs. R. Spear, E. Wiles, and J. E. Dyson were elected Members; and Messrs. Appleton, Atkinson, and Carr Associates.

The Council had much pleasure in accepting the offer of Mr. Ward, M.P.S., to give a course of twelve lectures to the students of the Association on "Pharmaceutical Chemistry," in the lecture-room of the Society, every Thursday evening, at 9 o'clock, commencing March 24.

A special meeting of the Members and Associates was held March 17, for the purpose of considering the proposed legislation as to the regulations to be observed in the keeping and dispensing of poisons, as proposed by the Council of the Pharmaceutical Society. Mr. E. Wilson, the President, took the chair, and there was a good attendance. After eliciting the opinions of all present, and fully discussing the subject (which incidentally brought out the fact, that all were adopting precautionary measures of some kind), the following resolution was unanimously adopted:—

"That this meeting is desirous to express its thanks to the Council of the Pharmaceutical Society for its valuable suggestions as to the regulations to be observed in the keeping and dispensing of poisons, but feels that, as the heavy responsibilities resting upon the members of the trade tend to make them take the most careful precautionary measures to prevent accident, and as every business is so varied and peculiar in its character and circumstances, each principal ought to remain at liberty to make such arrangements as will best suit his own particular case, and, therefore, any definite legislation on the subject would be unwise, inconvenient, and unnecessary."

The subject of the licence for the sale of patent medicines was then introduced, it being deemed desirable to ascertain the views of the Association on the matter, although the action of the Council in London in reference thereto is, for the present, suspended. The following resolution was unanimously agreed to:—

"That this meeting is of opinion that it is not desirable to abolish the licence for the sale of patent medicines, but it would not object to an uniform charge of 10s. or upwards."

This concluded the business of the meeting.

#### THE SCARBOROUGH CHEMISTS' ASSOCIATION.

The monthly meeting of the above Association was held on Monday, April 4, when the chief business of the evening was to pass most unanimously, without a single dissentient, a resolution condemning the proposed regulations for the keeping and dispensing poisons, so far as they shall be compulsory, as a most unnecessary restriction on the liberty of the chemist, and entailing further responsibilities of great magnitude, without any corresponding advantage.

#### CHEMICAL SOCIETY.

At the ordinary meeting held on the 3rd of March, Professor Williamson, F.R.S., President, in the chair. Mr. C. P. Sandberg, of Stockholm, was elected a Fellow of the Society. Dr. Gladstone read an important paper "On Refraction Equivalents," giving the results of recent investigations on the specific refractive energies of different bodies. (A long abstract of this paper is printed in the *Chemical News* of March 11.) The next paper was by Dr. Thudichum, on "Kryptophanic Acid," a normal ingredient of human urine. The substance is obtained from the primary material by first forming its limo salt, transforming this by neutral lead-acetate into lead-kryptophanate, and decomposing the latter by sulphuretted hydrogen. Kryptophanic acid is an amorphous, gummy mass, transparent and nearly colourless. It forms salts with the alkalies, the alkaline earths, and other metals. Mercuric nitrate produces in the aqueous solutions of

its earthy salts a white precipitate; the ordinary analysis for urea is thus shown to be liable to error. The acid is dibasic, and has the formula  $C_5H_9NO_3$ , but in some instances it may be viewed as tetrabasic, and in that case its formula must be written  $C_{10}H_{18}N_2O_{10}$ .

March 17. The President in the chair.—Messrs. D. Brown, A. Muirhead, T. L. Patterson, D. Penny, and S. T. Smith were elected Fellows. Mr. W. H. Perkin, F.R.S., read a paper on "Artificial Alizarine." The author commenced with the history of the various researches which finally have led to the artificial production of alizarine. Alizarine was first obtained from madder-root by Robiquet and Colin, and investigated by Schunk. Graebe and Liebermann, when submitting alizarine to the action of a reducing agent, found a hydrocarbon, which proved to be identical with anthracene from coal tar. Anthracene having thus been obtained from alizarine, it remained to produce alizarine from anthracene. For this purpose anthraquinone, an oxygenated derivative of anthracene, was treated with bromine, the bromine compound thus formed acted upon with caustic potash, and the potash salt produced by this treatment decomposed by hydric chloride. The product of these successive reactions was alizarine. To turn this discovery to practical account the bromine required in the process must be replaced by the cheaper oil of vitriol. Artificial alizarine is entirely identical with the natural colouring matter. Both dissolve in caustic alkalies, forming violet solutions of the same tint: when applied to mordanted fabrics they produce exactly the same colours, bearing treatment with soap equally, and resisting in the same degree the influence of light. Lastly, they show identical absorption bands in the spectrum. Still, as a substitute for madder, artificial alizarine has been objected to, on the ground that pure alizarine alone will not produce the madder colours, other colouring matters being yet required. But Schunk asserts that the final result of dyeing with madder is simply the combination of alizarine with the mordants employed. A good deal has also been said about the supply of anthracene; it must, however, be remembered that tar-distillers have as yet but little experience in separating this substance; Mr. Perkin believes that coal-tar contains considerable quantities of this hydrocarbon. No doubt the kind of coal used, as well as the temperature employed in the gas-works, influences the quality of the tar as a source of anthracene, but upon these points no definite information has yet been obtained. Mr. Perkin illustrated his lecture by exhibiting samples of fabrics dyed and printed with artificial alizarine, and also by projecting the spectra of some alizarine solutions on a screen. By producing alizarine from anthracene Graebe and Liebermann have given the first instance of the artificial formation of a vegetable colouring matter. The way by which the beautiful discovery has been arrived at proves, as the President pointed out, decisively the value of studying the molecular arrangements of chemical compounds.

Anniversary Meeting, March 30. The President in the chair. The following officers were elected for the ensuing year:—President: A. W. Williamson, Ph.D., F.R.S. Vice-Presidents who have filled the office of President: Sir B. C. Brodie, F.R.S., Warren De la Rue, Ph.D., F.R.S., A. W. Hofmann, D.C.L., F.R.S., W. A. Miller, M.D., D.C.L., F.R.S., Lyon Playfair, Ph.D., C.B., F.R.S., Col. P. Yorke, F.R.S. Vice-Presidents: J. H. Gilbert, Ph.D., F.R.S., E. Frankland, Ph.D., F.R.S., A. Matthiessen, Ph.D., F.R.S., H. M. Noad, Ph.D., F.R.S., W. Odling, M.B., F.R.S., T. Redwood, Ph.D. Secretaries: A. Vernon Harcourt, M.A., F.R.S., H. H. Perkin, F.R.S. Foreign Secretary: H. Müller, Ph.D., F.R.S. Treasurer: F. A. Abel, F.R.S. Ordinary Members of the Council: E. Atkinson, Ph.D., H. Bassett, E. T. Chapman, F. Field, F.R.S., D. Forbes, F.R.S., M. Holzmänn, Ph.D., E. J. Mills, D.Sc., W. J. Russell, Ph.D., Maxwell Simpson, Ph.D., F.R.S., R. Angus Smith, Ph.D., F.R.S., J. Tyndall, LL.D., F.R.S., and A. Voelcker, Ph.D. The President, in delivering the usual address, congratulated the Fellows on the increasing usefulness and prosperity of the Society. He mentioned as the most interesting incident in the history of the past year, the delivery, by M. Dumas, of the inaugural Faraday Lecture, which, indeed, was an impressive tribute to the memory of the great philosopher. Next, it was stated that the Council had thought it to be of importance to give greater publicity to the proceedings of the Society, and that accordingly



arrangements had been made for sending abstracts of the papers to such periodicals as desire to publish them. Another matter of importance, which has been referred to a sub-committee of the Council, is the plan to publish, conjointly with the French Chemical Society, monthly reports of all that is done in the science in England, France, and Germany. The President hopes at the next anniversary meeting to be able to congratulate the Society on the commencement of a system of international working. After having stated the present number of Fellows and other matters concerning the state of the Society, the President delivered an impressive speech in memory of Thomas Graham, who died on the 16th of September of last year. The leading features of this speech are to be found in the biographical sketch which appeared in the first number of *Nature*, but the following allusions to Graham's official career are new:—"In 1855, Graham was appointed Master of the Mint, an office which Sir John Herschel had recently resigned. His illustrious friend Hoffmann gives a lively description of the manner how Graham discharged the responsible duties of his high office. The new Master of the Mint showed an activity, a circumspection, a mastery of details, an amount of industry, and, when occasion required, an impartial severity, which astonished every one—more especially some of the officials of the Mint. Such requirements had not hitherto been made, nor such control exercised. A strong resistance was made to the plans of innovation and alteration of the new Master. It was years before he gained a complete victory, and before he was able to return to his favourite study—the study of nature. But at last this longed-for period came, and a series of happy years followed. Some of Graham's most beautiful researches date from this period. They sprang from a pure love of science. Graham needed to earn no name or position—both had long been his undisputed property." The President concluded this commemorative speech by saying, that in many of his ideas Graham was in advance of his contemporaries, and that the results of his labours will be sure to stand the test of future investigations.

#### ROYAL SOCIETY.

We learn from the last number of the Royal Society's *Proceedings* that there are fifty-three candidates for election into the Society, and that twenty-one of these are members of the medical profession. From this imposing body of candidates the Council will select fifteen for the Fellowship. The names of the candidates have been published, in accordance with the statutes, and are here given:—William Baker, C.E., E. M. Barry, R.A., Rev. Francis Bashworth, B.D., B. E. Brodhurst, F.R.C.S., Samuel Brown, P.I.A., James Brunles, C.E., F. T. Buckland, M.R.C.S., G. W. Callender, F.R.C.S., Commander William Chimmo, R.N., F. Legros Clark, F.R.C.S., Henry Dircks, Alexander Fleming, M.D., P. Le Neve Foster, M.A., Sir Charles Fox, C.E., William Froude, M.A., T. M. Goodeve, M.A., E. H. Greenhow, M.D., E. T. Higgins, M.R.C.S., Rev. Thomas Hineks, B.A., Charles Horne, Rev. A. Hume, LL.D., James Jago, M.D., W. Stanley Jevons, M.A., George Johnson, M.D., M. K. King, M.D., J. A. Langridge, C.E., Nevil Story Maskelyne, M.A., M. T. Masters, M.D., Major F. G. Montgomerie, R.E., Alfred Newton, M.A., Andrew Noble, Thomas Nunneley, F.R.C.S., E. L. Ormerod, M.D., Captain Sherard Osborn, R.N., Rev. Stephen Parkinson, B.D., Captain R. M. Parsons, R.E., W. O. Priestley, M.D., C. B. Radcliffe, M.D., W. H. Ransom, M.D., E. J. Reed, C.B., W. J. Russell, Ph.D., R. H. Scott, John Shortt, M.D., Edward Thomas, C. F. Varley, C.E., G. F. Verdon, C.B., Augustus Voelcker, Ph.D., Viscount Walden, P.Z.S., G. C. Wallich, M.D., A. T. H. Waters, M.D., Samuel Wilks, M.D., Captain C. W. Wilson, R.E., and John Wood, F.R.C.S.

#### LAW AND POLICE.

##### SALE OF VERMIN POWDERS BY GROCERS.

At the Banbury Borough Police-court, on the 21st ult., Mr. Beesley made an application to the mayor and bench of magistrates under the Pharmacy Act, with regard to the sale of poisons in grocers and provision shops in Banbury, and produced a packet of S. A. Cowan's "Vermin Destroyer,"

which had been bought at one of them, and which he had analysed, and found to contain a large proportion of arsenic. He had written to the Secretary of the Pharmaceutical Society of Great Britain, of which he (applicant) was the local secretary, and had been informed that parties other than those qualified could not sell such, and were liable to a penalty of £5. He had been also told that it was a matter for the police to take up.—Dr. Griffin (one of the magistrates): How much arsenic did you find in this packet?—Mr. Beesley: About three grains. The police were instructed to take proceedings against parties selling such stuff, and the Mayor said they were indebted to Mr. Beesley for bringing the subject before them.

##### AN ASSISTANT'S CLAIM FOR SALARY.

At the Kidderminster County Court, on the 30th ult., Mr. Rupert Kettle, the judge, stated that he had made inquiries into the custom of the trade in the matter of *Manxmort v. Dance*, where the plaintiff, a chemist's assistant, sued the defendant, a tradesman at Stourport, and claimed salary in lieu of notice, having been discharged from defendant's employ. His Honour said that he had ascertained that a month's notice was usual, and gave plaintiff a verdict for the amount claimed (£4 7s. 6d) and costs.

##### VACCINATION AND LITIGATION.

A Leeds druggist, named Toulson, who was recently summoned for the third time for refusing to obey the Vaccination Act, but who was discharged, owing to an informality in the service of the summons, on Wednesday summoned the Vaccination Inspector to recover from him a guinea as compensation under the Act, which provides that compensation shall be given to any person improperly brought before the magistrates. The question, however, was raised whether the applicant was not debarred from demanding compensation because he did not ask for costs when the case against him was dismissed. Mr. Bruce, stipendiary magistrate, took the affirmative view of this point, and refused the application.

##### "MACASSAR," "KALYDOR," AND "ODONTO."—ROWLAND v. BREIDENBACH.

At Rolls' Court, on the 24th ult., Mr. Southgate, Q.C., moved on behalf of the defendant, Mr. Henry Breidenbach, of 157B, New Bond-street, perfumer to the Queen, to dissolve an injunction obtained *ex parte* by the plaintiffs, who are the well-known perfumers of Hatton-garden, on the 20th of December last, restraining the defendant from publishing advertisements and trade bills worded so as to induce the belief that the hair-oil sold by him under the title of "Macassarine Oil" is identical with the "Macassar Oil" manufactured by the plaintiffs; and also to restrain the use of the words "Kalydor" and "Odonto," as applied to any wash or dentifrice not manufactured by the plaintiffs, who claim the exclusive right to use the words "Macassar," "Kalydor," and "Odonto," to denote an oil for the hair, a wash for the complexion, and a dentifrice. Macassar oil, properly speaking, is defined to be the oil expressed from safflower seeds at Macassar, in the south-west of the Island of Celebes, and coloured red with alkanet root. In speaking of "Thine incomparable oil, Macassar," in *Don Juan*, canto 1, Lord Byron appears, from the note in Moore's edition, to have been referring to some French preparation of that name. Messrs. A. Rowland and Son seem to have prepared their Macassar oil since 1800, and they claim an exclusive property in the term, as well as in the terms "Kalydor" and "Odonto," which they say were invented by them in the years 1822 and 1828 respectively, to denote the articles which those terms still denote. On the 6th of December last Mr. Breidenbach, by way of reply, it would seem, to some advertisement cautioning persons not to infringe the plaintiffs' rights, inserted in the *Times* an advertisement headed "Blow for Blow! Defiance and Co-operation!" offering "Christmas boxes," containing a 3s. 6d. bottle of "Macassarine Oil" for 1s., a 4s. 6d. bottle of "Kalydor" for 1s., a 2s. 9d. box of "Odonto" for 1s., and so on, with other "toilet luxuries." This challenge, after the usual correspondence, led to the filing of the bill, and to the injunction being moved for *ex parte* and granted; and this had the effect of completely stopping the sale of the Christmas boxes, which remain on the defendant's hands. The injunction Mr. Breidenbach now sought to dissolve,



moving also for an inquiry what damage he had sustained by the granting of the injunction.

The evidence in support of the motion was very voluminous, and went chiefly to show that the words "Macassar," "Odonto," and "Kalydor" had been used by many perfumers, and for many years, and it was argued therefrom that even if the plaintiffs had had any original right to exclusive user of the terms, which the defendant denied, they had lost that right by acquiescence. It was shown that Price and Co., Gosnell and Co., and many other perfumers each had their Macassar Oil, which was sold with the manufacturer's name prefixed in the most public way, being advertised similarly, though not to the same extent, as the plaintiffs' preparations; and it was denied that the plaintiffs possessed any exclusive right to the use of the term, unless in juxtaposition to their own name, as "Rowland's Macassar," to distinguish it from "Price's Macassar," or any other maker's Macassar.

Mr. Jessel, Q.C., and Mr. Dundas Gardiner, for the plaintiffs, in opposition to the motion, contended that the names "Kalydor" and "Odonto" belonged to them originally, and that they had not lost the right of ownership by acquiescence. The defendant had desisted in June last from selling "Macassar," thus virtually admitting the plaintiffs' exclusive right to the word; and the term "Macassarine," and the general resemblance of the bottles and wrappers to those of the plaintiffs, were enough to impose upon a careless purchaser, who was, equally with other persons, entitled to the protection of the Court.

The Master of the Rolls did not intend to determine upon motion the question whether or not the plaintiffs had an exclusive right to use the words "Macassar," "Kalydor," and "Odonto;" and if they had that right originally, whether or not they had lost it by acquiescence. The proper time for determining those questions was at the hearing of the cause. All he should decide on the present occasion was that the plaintiffs' case failed as regards the Macassarine Oil. There was no evidence that a single person had bought the one oil under the belief that it was the other, and looking at the bottles in their wrappers he was bound to say that there was not the slightest resemblance between the two that could deceive a purchaser. It was a settled rule that a person who obtains an injunction *ex parte* does so at his own peril; and as in this case the plaintiffs' injunction went too far, his Lordship should dissolve it altogether, and direct the costs of it to be costs in the cause, reserving the question as to damages sustained by the defendant by reason of the injunction having been granted until the hearing.

#### PROSECUTION UNDER THE PETROLEUM ACT.

At the Scarborough Police-court, on the 16th ult., Mr. Robson, chemist, Eastborough, was charged with unlawfully selling a certain quantity of petroleum, of a greater strength than was allowed by the Act of Parliament, and that the same was not labelled according to the requirements of the said Act, on the 9th ult. The charge was brought by Mr. Aspin, the Inspector of Weights and Measures, and Mr. J. J. P. Moody, Clerk of the Local Board, appeared to prosecute on behalf of that body. Mr. W. B. Richardson defended. It was explained in the charge that petroleum within the meaning of the Act was that which gave an inflammable vapour at a temperature of less than 100 deg. Fahrenheit. Mr. Aspin stated that he had obtained a quart of petroleum from Mr. Robson, on the 9th ult., and on testing it, it gave off an inflammable vapour at a temperature of 96 deg. He tested it with the description of apparatus prescribed by the Act, and in the way specified therein. No label was placed upon the can containing the oil, according to the regulations of the Act in this case provided. In cross-examination he said he made about fifty experiments with the apparatus, which he had had about two months. Mr. Whitfield, chemist, had instructed him how to make the test. He had asked Mr. Whitfield to be present when he tested Mr. Robson's petroleum, or to make the test himself, but Mr. Whitfield declined, partly on the ground that he was not capable satisfactorily to do so; also for the reason that he did not consider the Act sufficiently defined, and that he did not wish to come into antagonism with Mr. Robson or any other tradesman, in being obliged to give evidence against him. He (Mr. Aspin) had never studied chemistry, and he

did not consider it necessary to do so in order to make the test in question. The thermometer, according to the Act, was to be on a scale of not less than 10 deg. to half an inch, but the one he used was a trifle incorrect between 80 and 90 deg., but it was correct in all other respects. He had tested the same oil several times, and always found it alike within a degree or two. On the part of Mr. Robson the accuracy of the test was disputed, on the ground that the inspector was not qualified to make it, and that the instruments used were not sufficient to produce an accurate result. He offered to bring a cask of the oil in question into court, and place a lighted newspaper in it; he was certain that no explosion would occur by so doing, and for that reason he contended that the oil was not petroleum within the meaning of the Act. After some consideration, it was agreed to adjourn the case for a fortnight, in order to have the petroleum tested by some independent person.

The following letter, from Mr. John Whitfield, F.C.S., appears in the *Scarborough Express* of the 19th ult.:—

"Will you give me space for a few particulars bearing on the recent petroleum prosecution. As stated before the magistrates, I initiated the inspector in the use of his apparatus, and having done this, I declined, from motives which can be easily understood, taking any further personal part in the prosecutions which might follow. Mr. Aspin is reported to have stated in his evidence that I pleaded *inability*: he denies his intention to convey this meaning, which I must repudiate, as, to any one accustomed to chemical manipulation, it is the simplest thing possible. In fact, as Mr. Aspin stated, chemical knowledge is not required, and I do not doubt that he has now free command of his instrument; and I willingly bear witness to his intelligence and tact in the matter. But the weakness is here, all are agreed that the Petroleum Act of 1868 is very defective. As in the instructions given for testing the oil, certain details are omitted which leave so much to the discretion of the operator, that with the same sample a difference of 10 deg. can easily be made in the flashing point—for instance, a thermometer is suspended in a tin vessel containing the oil, beneath which is placed a spirit lamp; as the temperature rises, a lighted taper is passed at intervals over the surface of the liquid; at a certain point the vapour rising from it takes fire, this is said to be the 'flashing point,' and it should not occur under 100 deg. The object of the regulation—and no doubt a proper one—is to prevent the storage of large portions of Petroleum giving off inflammable vapours at ordinary summer temperature. A 'small flame' is directed to be used, and in one of his experiments with Mr. Robson's oil the Inspector used a small flame, and in 37 minutes the flash occurred at 102 deg. After the case was adjourned on Wednesday, he repeated the test in an ante-room of the Town Hall, in the presence of several gentlemen interested in the case, and then, in 22 minutes, the flame being of course larger than before, it flashed at 97.5 deg. The thermometer being criticised, it was compared with three others all bearing the names of makers of repute and belonging to a set of testing instruments brought into court by the merchant supplying the oil to Mr. Robson, Mr. Allison of Hull. The Inspector's thermometer registered 3 deg. lower than these, throwing a further doubt on the result. He has allowed me to place it in the hands of a gentleman possessing a certified thermometer for comparison, but I have not yet heard the result and therefore cannot say which is correct."

Mr. Aspin said he did not expect to receive any help from the trade after noticing the recent formation of the Chemists' Association. But I can assure him that the petroleum question has never yet in any form been mentioned in connection with that association. Though I have no doubt if opportunity offers, it will endeavour to promote the necessary amendments which must, sooner or later, be made in the Petroleum Act of 1868.

#### THE RIGHT OF MAKING PILLS.

At the Aston Petty Sessions, on the 6th inst., Sophia Kingham, of Aston, was summoned by George Pardoe, chemist, Pershore-street, Birmingham, for having unlawfully made, forged, and counterfeited a trade mark belonging

\* We learn from Mr. Whitfield that the Inspector's thermometer was found to be one degree too low, and the merchant's two degrees too high.



to the said George Pardoe, and used by him in the sale of "Taylor's" Dandelion, Camomile, Castor Oil, Antibilious, and Rhubarb Pills," with intent to defraud, and did apply such counterfeit imitation thereof to the covers and labels of thirty-six boxes containing pills, purporting to be the manufacture of George Pardoe. Mr. Maker, solicitor, who appeared for the prosecution, said the proceedings were instituted under the 3rd section of the Merchandise Marks' Act, 1862. Mr. Pardoe was the owner of certain pills above described, and made from a prescription of Dr. Taylor, received by Mr. Pardoe from that gentleman some twenty years ago, since which time he had the exclusive right of selling the pills. The learned gentleman said there could be no dispute about the fact that anyone had a right to make and sell pills, but he contended that when a man made a particular prescription, placed the pills in a peculiar box of a certain colour, and with a distinctive label, that constituted for him a right, and gave him a trade mark, which no one could pirate without coming under the provisions of the Act. Boxes were produced, and the resemblance between those sold by the defendant and complainants was perfect, except that the address, "20, Pershore-street," was omitted by the defendant. Mr. Everitt, one of the magistrates, said he did not think the complainant could recover, because he had not registered the trade mark. Mr. Maker replied, that it was the application of the colourable imitation of Mr. Pardoe's trade mark which constituted the attempt to defraud. He understood that the defendant did not deny the making of the pills, but claimed the right to do so. Mr. Everitt thought the section was against complainant because he was not Dr. Taylor.—Mr. Maker maintained complainant had a right by succession. If it could be shown that the pills were generally manufactured and sold by the public he would have no case. The important question was whether the boxes of pills manufactured by defendant were calculated to deceive the ordinary purchaser, and he was prepared to call witnesses to prove that they purchased some of defendant's pills, believing that they were the same they were accustomed to buy, and sold by complainant. The case was adjourned for a fortnight, and defendant bound over to appear.

#### VIOLATION OF THE PETROLEUM ACT.

At the Eckington Petty Sessions, on the 4th inst., Mr. John Bagshaw was charged before the sitting magistrates with selling petroleum at Spinkhill, on the 17th of February, without a licence. The officer who preferred the charge stated that he went to defendant's shop and found on his premises 36 gallons of paraffin, 12 gallons petroleum, and 6 gallons of benzoline, which he was in the habit of selling without a licence. Defendant did not deny the charge, but said he had applied to the town clerk of Chesterfield, but could not get a licence. He had, however, sent the articles back, and had now none on his premises. Defendant was fined £5.

#### CASES OF POISONING

##### BY BEER ACCIDENTALLY CONTAMINATED WITH LEAD.

PUBLIC attention has recently been drawn by a letter in the *Lancet* to a number of cases of accidental lead poisoning in the neighbourhood of Guildford, supposed to have been occasioned by the beer supplied from a particular brewery. At the date when the letter was written none of the cases had terminated fatally, but a man named Henry Wapshott, a labourer 70 years of age, residing in the vicinity of Ripley, has since died, and on the 29th ult. Mr. G. H. Hull, coroner for the Western Division of Surrey, held an adjourned inquest at the Talbot Hotel, Ripley-green, to investigate the circumstances of his decease. From the evidence it appeared that the man had on several occasions partaken of beer at two public-houses supplied by the same brewer, and shortly afterwards was seized with such symptoms as indicated lead-poisoning, and the blue line on the gums, referred to in the *Lancet* as proof of this kind of poisoning, was very distinct. Despite medical attention, the man died in great agony; and although a *post-mortem* examination showed inflammation of the lungs, Dr. Taylor, of Guildford, was of opinion that death had undoubtedly been accelerated by the lead poison. An application was accordingly made to

the Secretary of State to allow Dr. Taylor, of London, to analyse the stomach; but it appearing that red lead had been found at the brewery in question in a tank used for cleansing barrels, the Secretary of State thought an analysis unnecessary. Mr. Hooker, analytical chemist, stated that he had analysed two samples of beer obtained from a public-house at Ripley, and found traces of red lead in each; but the quantity was exceedingly small. The brewer, who was in attendance, explained to the jury that by some accident some red lead had fallen into a galvanised iron tank used for cask cleaning, and that on having the tank cleaned out a quantity of sediment was found, which proved that was the source of the mischief. He added that the firm called in all their beer from the different houses as soon as they ascertained the above fact. The coroner wished the brewer to state publicly if he intended to destroy the beer which had been poisoned, but the witness replied that he did not believe that more than 20 casks had been poisoned, and the beer would be dealt with in such a way as not to injuriously affect the public. The jury returned a verdict to the effect that the deceased died of inflammation of the lungs, accelerated by the poison of red lead, casually and accidentally communicated in some beer of which he had partaken.

#### ACCIDENTS.

##### INADVERTENTLY POISONED.

An inquest was held at Pemberton, near Wigan, on the body of William Richardson, collier, aged 26, who had died on the previous Sunday immediately after taking a powder which he had obtained at the surgery of Messrs. Johnstone and Beaman, surgeons, Upholland.—Mr. Peace, solicitor, appeared on behalf of Mr. Johnstone, who had dispensed the medicines, and stated that by an unfortunate mistake strychnia had been administered to the deceased instead of santonine. Mr. Johnstone had only recently entered upon the practice, and was not aware that any strychnia in a crystal state was in the surgery. The bottle was not labelled, and was in a cupboard in which the santonine was kept.—Mr. George Warwick Johnstone, the surgeon who dispensed the medicine, gave evidence. He said he was not at the time aware that there was any strychnia in a crystal form in the surgery. The bottle was not labelled poison, and in several respects it resembled the one in which santonine was kept.—The verdict of the jury was to the effect that death had resulted from censurable oversight on the part of Mr. Johnstone, and that, in the opinion of the jury, great blame was attached to those who placed the bottle in the closet without a proper poison label.—Richardson has left a widow and four children entirely unprovided for.

About half-past 10 o'clock on Sunday night, the 13th ult., the shop of Mr. W. T. Walker, a chemist, in High-street, Camden-town, was much damaged by a fire, which had been caused by a light being carelessly thrown down in some part of it. The contents were insured in the Norwich Union Office.

Early on the morning of Wednesday, the 23rd ult., a fire occurred at the house of Mr. C. B. Stamp, chemist, 29, High-street, Hampstead. It resulted in the destruction of the back rooms on the ground and first floors, the front and back rooms on the second and third floors, and part of the roof, and in serious injury to the rest of the house. Mr. Stamp is insured.

At Accrington, on the 19th ult., a young woman named Susannah Horsfall went to Dr. Millar's surgery to have some teeth extracted. The teeth were difficult to extract, and chloroform was administered. After having pulled out the third tooth, Dr. Millar observed that the patient was dying; and life was soon extinct. She had had chloroform a week before, but it did not take effect. From the report of the coroner's inquest on the 21st., the chloroform seems to have been properly exhibited after due precaution. The verdict of the jury was, "Death from syncope produced by a dose of chloroform skilfully administered."

The publisher of the CHEMIST AND DRUGGIST has in stock some handsome reading cases to hold six numbers of this publication. These will be found very convenient by those who care to keep their papers in order. Price 2s. 9d. each, sent for enclosure to any London wholesale house, or 2s. 6d. post free.—[ADVT.]



## GOSSIP.

Dr. McNab has been appointed to the Chair of Botany at the Cirencester Royal Agricultural College.

Dr. Rokitsansky has been elected President of the Imperial Academy of Sciences at Vienna.

The French Scientific Congress will meet at Moulins in August next.

Miss Garrett has been appointed one of the physicians of the East London Hospital for Children.

Dr. Hooker has been elected an Honorary Member of the French Acclimatisation Society, on account of his exertions with regard to the Cinchona plant.

We learn from *Nature* that the chair of chemistry at Königsberg has been accepted by Dr. Gräbe of Leipzig, known through his papers on chinone and alizarin.

Herr Redienbacher, Professor of Chemistry in the University of Vienna, died last month of apoplexy, at the age of sixty. He had been connected with the University since 1839.

The Belgian Royal Academy of Sciences offers five prizes, of the total value of 4,000 francs, for competition in 1871. One subject is mathematical, one physical, one botanical, one zoological, and one chemical.

More than half of the prizes offered by the French Imperial Academy of Medicine for original medical essays on stated subjects have not been awarded, owing to want of merit in the candidates.

The Imperial Academy of Science, Agriculture, and Art, of Lille, offers two prizes of a thousand francs each; one for the best work on some branch of experimental physics, the other for the best work on the use of the thermometer in medicine.

A new species of medical advertisements has been developed in a Minnesola paper. Two prominent physicians of the town contribute reports of the condition of their patients, all of whom appear to be "improving," "convalescing," "convalescent," "gaining," "doing well," or "getting better."

At a recent meeting of the Briton Medical and General Life Association, the report stated that 2,224 policies have been issued during the past year, producing in new premiums £26,706; that the total income was £241,890, and the assets £682,324. A dividend was declared at the rate of 5 per cent. per annum.

We now hear of immense deposits of rock salt underlying the lower part of the Tees Valley. Messrs. Bolckow and Vaughan discovered the existence of this salt deposit a few years ago, while boring for water at their Middlesborough Works, and they have recently commenced sinking a couple of shafts. A company has also been formed to work another large royalty near Middlesborough.

A curious advertisement appeared in the *Times* a few days ago. Attracted by the heading "Marvellous Discoveries," the spirited individuals to whom the advertiser appealed were induced to read the following jingle: "Could advertiser meet with a Bolton as did Watt, Advertiser's name, like theirs, would never be forgot; For science builds the monument of fame, Whereon the sculptor marks the inventor's name."

The Senate of the University of London have given notice that, on Wednesday, the 27th of April, they will proceed to elect examiners in the various departments. Most of the present examiners will present themselves for re-election, but there will be vacancies by retirement in the following branches:—One in mathematics and natural philosophy, worth £200 a year; one in chemistry, worth £175 a year; one in medicine, worth £150 a year; one in physiology, comparative anatomy, and zoology, worth £150 a year; one in the English language, literature, and history, worth £120 a year; two in law and the principles of legislation, worth £100 a year each; one in the French language, worth £100 a year; two in midwifery, worth £75 a year each; one in materia medica and pharmaceutical chemistry, worth £75 a year; one in botany and vegetable physiology, worth £75 a year; two in geology and palæontology, worth £75 a year each; one in the German language, worth £30 a year; two assistants in chemistry, worth £25 a year each.

## GAZETTE.

## BANKRUPTS.

HEDDEN, ARTHUR, and WILLIAM FOXCROFT, Beeston Royds, Leeds, prussiate of potash manufacturers. March 28. C.C. Leeds, April 14, at 11. Thomas Marshall, Registrar.

SCOTT, GABRIEL, Redbridge, bone and chemical manure manufacturer. March 10. First general meeting, C.C. Southampton, March 29, at 12. A. S. Thorndiko, Registrar.

TODD, WILLIAM HURFORD, Cefn Mawr House, Beaufort Iron Works, Brecknock, surgeon. March 24. C.C. Tredegar, April 14 at 11. Horace Shepherd, Registrar.

## PARTNERSHIPS DISSOLVED.

BRABANT and ALDERSEY, Havant, Hants, general medical practitioners. March 15.

CALEDONIAN OIL COMPANY, oil manufacturers at Benhar, near Whitburn, and the PARAFFINE OIL COMPANY of Mandal. November 11, 1869; as regards James Dunsmure, M.D., Queen-street, Edinburgh.

GREENWELL and TAYLOR, 13, Queen's-terrace, St. John's-wood, Middlesex, pharmaceutical chemists. March 25.

HARRIL, S. C. and Co., 4, Railway-place, Burdett-road, Bow, Middlesex, and 26, Bush-lane, London, glycerine soft soap manufacturers. March 30. Debts by Stephen Chester Harril, who continues the business.

HUSBAND and OWEN, York, surgeons and general medical practitioners. April 1. Debts by William Dalla Husband.

JONES and TAYLOR, Wolverhampton, Stafford, manufacturing chemists. October 31, 1869. Debts by Edward William Taylor Jones, who continues the business under the style of E. W. T. Jones and Co.

MACFARLAN, J. F., and Co., chemists and druggists, 17, North Bridge, Edinburgh. March 15, 1870; as regards the representatives of John F. Macfarlan, who died on Feb. 21, 1861, and of Dr. Alexander J. Macfarlan, who died on Feb. 13, 1869. Debts by D. R. Brown, J. R. Young, David Brow, and John A. Wink, who continue the business under the same firm.

MADDOCK and HARROW, Tunbridge Wells, Kent, chemists and druggists. December 31, 1869.

READ BROTHERS and Co., Wolverhampton, varnish manufacturers. March 14.

STEVENSON, JOSEPH and JOHN, Sheffield, York, and 9, Cripplegate-buildings, London, comb manufacturers. March 31. Debts by John Stevenson, who continues the business.

WILLMORE and CRICKSHANK, Wharf-street, Cape of Good Hope, near Birmingham, and 62, Graham-street, Birmingham, manufacturing chemists. March 17. Debts by Richard Crickshank, who continues the business.

In our last month's Gazette, after the notice of the dissolution of partnership between Northcott, W. and J. S., drug brokers, 13, Rood-lane, London, it should have been "as far as regards W. (not J. S.) Northcott."

## Trade Memoranda.

Mr. G. H. Portbury (late of Wellington) has succeeded to the business of Mr. J. Purrett, at Banwell, Somersetshire.

The guardians of the Worksoy Union have accepted the tender of Messrs. Jones and Son, of that town, for the supply of drugs.

The Oldham Corporation Gas Committee are prepared to receive tenders for the tar produced at their different gas stations.

We take this opportunity of referring any French firm, desirous of doing business with the British drug trade, to our agent in Paris, Mr. P. D. Orvis, 35, Rue Canmartin, whose best attention may be relied upon.

We have been requested to acknowledge a donation of £1 6s. 6d. from the chemists of Ashton-under-Lyne for Mr. Henry Bellingham, for whom an appeal was inserted in this journal in our January number. We were informed that other donations had been received, but up to the time of going to press the list has not come to hand.

Messrs. Schweitzer and Co., the proprietors of "Cocoatina," have sent us a sample of a new preparation which they are now sending out, in which the excellent vanilla flavour is blended with their original excellent preparation of cocoa. It is called "Cocoatina à la Vanille," and will be much relished by those who enjoy the richness of the flavouring.

The following advertisement appeared in the *Daily Telegraph* of March 25, 1870, and we call attention to it lest at least one branch of the heterogeneous connection which



Messrs. Glover seem anxious to obtain should have missed noticing it:—

**GLOVER and CO.,** Wholesale Druggists, supply the Trade, Manufacturers, Invalids, and Families, with Pure Drugs and Chemicals, for cash, at very low prices. Prescriptions dispensed.—19, Goodge-street, Tottenham-court-road.

Messrs. Dows, Clark, and Van Winkle (late of Great Wild-street), who have so successfully introduced the American Ice Cream Soda Water Apparatus into Europe, have lately removed into large and most suitable premises in Bedford-street, Strand. Their ground floor will be used chiefly as a show room for the handsomely-finished apparatus which they supply, and the upper floors are divided into workshops, in which the multifarious manufactures which their business demands are carried on. The establishment is well worth a visit of inspection, to which we understand chemists are invited.

Chemists who are thinking of refitting their shops during the ensuing season may consider the following suggestion, which has been brought under our notice, and which, if adopted, would be a considerable saving in immediate expense and future annoyance. Every one who has had to do with a shop at all has, doubtless, more than once experienced the annoyances connected with opening and closing occasioned by refractory shutters. The old-fashioned kind, which were put together like a dissected puzzle, are now quite out of the question; the modern revolvers, wood or iron, have mischievous tendencies which sometimes try the love of their warmest admirers. The question put to us is, why use any shutters at all? Is it to prevent the entrance of robbers, who, by the way, do not usually enter the house which they intend to plunder through the front window, by which a policeman should be regularly passing. Still less would they be likely to adopt such an insane course if a light were kept burning, and the place left open for the frequent inspection of said policeman. In the great Cornhill robbery of jewellery, the thieves concealed themselves in an upper room until the time arrived for their descent into the shop, and then the shutters were a positive protection to them. Mr. Walker has since, in all his establishments, kept his window free from shutters, and has trusted to the far more effective protection of light. In the cities of America, shutters are almost unknown, and banks, jewellers, and others, who leave valuables on their premises, always leave some friendly gas light on guard also. John Bull, junior, will doubtless continue to follow in the footsteps of John Bull, senior, for a long time to come yet, but he might at least give some reason for taxing himself so heavily both in time, labour, and money.

One result of the removal of the Pharmaceutical Society's *soirée* from Bloomsbury-square to South Kensington, will inevitably be the discontinuance of the exhibition of pharmaceutical novelties and products which has hitherto been held on these occasions. This will, perhaps, in some degree, add to the success of the similar display which we are pleased to notice from an advertisement, the local committee at Liverpool propose to hold during the visit of the Pharmaceutical Conference to that town in August next. In the midst of such a district we may anticipate an unusually good exhibition of chemicals especially, and we do not doubt that both local and other manufacturers will appreciate the importance of the occasion to themselves, in which case we can assure them that the visitors will not fail on their part to appreciate their efforts. But without in the smallest degree wishing to injuriously affect the Liverpool show, this does seem to us a fit opportunity to suggest that the importance of our trade calls for something to be done in the way of establishing permanently an annual collection of specimens of the chemical and pharmaceutical progress of the year. Suppose, for instance, the managers of the Crystal Palace could be induced to lend to an influential committee for a couple of days each year a portion of their magnificent space for the display of such manufactures, what an interesting, instructive, and attractive display might be got together. It would, we imagine, answer the company's purpose to allow such a proceeding, as it could, in no way,

interfere with their normal arrangements, while it would be somewhat in accord with their original programme, and would certainly draw a large number of visitors directly and indirectly interested. A moderate charge to exhibitors would defray all expenses, and with energetic management we do not think there would be the smallest chance of failure. Such a venture, however, must be taken up by some persons immediately interested, and with such we leave the suggestion.

# TENDERS ACCEPTED.

**DUDLEY UNION.**—The guardians of the Dudley Union have accepted the tender of Mr. Nicklin for druggists' sundries.

**SHEFFIELD BOARD OF GUARDIANS.**—Drugs, Mr. Maw, Broad-lane.

**WALSALL UNION.**—The tender of Mr. Sneyd for trusses has been accepted. Double trusses 2s. 3d.; single trusses, 1s. 9d.

**PARISH OF BIRMINGHAM.**—For drysaltcries, the tenders of Messrs. Adams, of Whittall-street, and Arthur Williams, of Islington, were accepted. Tenders for the supply of drugs were received from Messrs. Banks and Richards, High-street; Mr. Phillip Harris, Bull Ring; Mr. Thomas Wallis Holdsworth, Upper Priory; Mr. Walter Robert Jones, Jamaica-row; and Mr. William Sumner, High-street. The three first were accepted. The following are the respective quotations:—

		Banks & Richards.	Harris.	Holdsworth.	Jones.	Sumner.
Acacia Gum .. .. .	lb.	1/2	1/3	1/1	0/10	2/8
" Powder .. .. .	"	1/10	1/10	1/8	1/8	3/0
Aromatic Confection, Powd. .. .. .	"	3/9	3/6	3/6	3/6	4/9
Acetate of Potash .. .. .	"	1/6	1/4	1/6	1/8	2/2
Acid, Acetic .. .. .	"	0/5	0/4	0/6	0/4½	0/6
" Benzoic .. .. .	oz.	1/2	1/0	1/1	1/2	1/3
" Citric .. .. .	lb.	2/10	2/8	2/8	2/10	3/0
" Gallic .. .. .	"	8/0	8/6	8/0	9/0	10/0
" Hydrocyanic .. .. .	"	1/3	1/6	1/0	1/5½	2/3
" Tannic .. .. .	"	5/6	6/0	5/6	5/6	1/1
" Tartaric .. .. .	"	1/4½	1/5	1/4	1/4	1/5
" Hydrochloric, pure .. .. .	"	0/6	0/4	0/4½	0/6	0/6
" Nitric .. .. .	"	0/10	0/8	0/8	0/10	1/10
" Sulphuric .. .. .	"	0/5	0/4	0/6	0/6	0/8
Aloes, Powdered Barbadoes .. .. .	"	2/4	2/6	2/2	2/0	2/0
Adhesive Plaster on Linen .. .. .	doz. yds.	3/6	3/3	4/0	3/9	13/0
Æther, Sulphuric .. .. .	lb.	4/8	4/6	4/9	5/0	6/6
Ammonia, Sesquicarbonate .. .. .	"	0/7	0/7	0/7	0/7	0/8
" Liquid, 880 .. .. .	"	0/7	0/6	0/6	0/6½	0/8
Ammonio-Citrate of Iron .. .. .	"	3/0	3/0	3/0	2/11	3/6
Aromatic Spirit of Ammonia .. .. .	"	2/0	3/0	3/0	2/4	3/2
Atropine, Sulphate .. .. .	"	7/0	7/0	7/0	8/0	15/0
Ammonia Murias Pulv. .. .. .	"	0/7	0/8	0/7	0/5½	0/10
Bark, Cinnamon .. .. .	"	2/0	2/3	2/0	2/6	4/0
Bark of Cascarella .. .. .	"	0/7	0/6	0/6	0/5	0/8
" Cinchona (Calisaya) .. .. .	"	2/6	3/0	4/6, 2/6	2/6	3/0
Biborate of Soda .. .. .	"	0/9	0/9	0/9	0/8½	0/9
Bicarbonate of Soda .. .. .	"	0/2	0/3	0/2	0/2	0/3
" Potash .. .. .	"	0/8	0/9	0/9	0/8½	1/1
Bromide of Ammonia .. .. .	"	9/0	8/0	8/6	10/6	11/0
Bismuth, Trinitrate .. .. .	"	15/0	14/0	15/0	16/6	17/6
Bitartrate of Potash .. .. .	"	1/0	0/11	1/0	0/11	1/0
Bluo Pill .. .. .	"	2/0	1/10	2/0	2/0	2/3
Bearberry Leaves .. .. .	"	1/4	1/6	0/6	0/7	1/2
Buchu Leaves .. .. .	"	1/0	0/8	1/0	0/10	1/0
Bromide of Potassium .. .. .	"	5/6	6/0	6/0	6/0	6/4
Burnett's Disinfecting Fluid .. .. .	gall.	4/0	5/0	5/0	4/0	4/6
Cantharides .. .. .	lb.	5/8	5/6	6/0	6/6	6/10
Calomel .. .. .	"	2/10	2/8	2/9	2/9	3/0
Calcined Magnesia .. .. .	"	1/6	1/6	1/4	1/6	1/7
Camphor .. .. .	"	1/8	1/11	1/6	1/6	1/8
Carbonate of Magnesia .. .. .	"	0/5	0/5	0/5	0/5½	0/6
Carbolic Acid (Calvert's Medicinal No. 2) .. .. .	"	2/10	3/6	3/4	3/4	4/0
" (No. 5) .. .. .	gall.	2/3	3/0	4/0	2/5	3/8
Castor Oil, (E.I.) .. .. .	lb.	0/8	0/8	0/7	0/7	1/6
Cod Liver Oil .. .. .	gall.	6/0	6/6	5/6	6/6	7/9
Confection of Roses .. .. .	lb.	1/4	1/4	1/4	1/4	1/9
Chloroform (Duncan's) .. .. .	"	4/4	7/9	8/0	7/3	8/8
Chloral Hydrate .. .. .	oz.	1/4	1/6	1/3	1/6	1/8
Chloride of Lime .. .. .	lb.	0/2	0/2	0/2	0/1½	0/3
Cresote .. .. .	"	5/0	5/6	5/0	—	6/0
Croton Oil .. .. .	oz.	0/5	0/5	0/5	0/5	0/6
Citrate of Iron and Strychnine .. .. .	"	0/6	1/0	0/6	0/7½	0/8
Castile Soap, Powdered .. .. .	lb.	1/0	1/0	1/3	1/4	1/0
Chlorodyne (Collis Brown's) .. .. .	11/ bott.	8/0	9/0	8/6	8/6	9/0
Chlorate of Potash, Powdered .. .. .	lb.	1/2	1/2	1/2	1/2½	1/4
Coal Tar Soap .. .. .	doz.	3/10	3/9	3/9	4/0	4/0
Colocynth Powder .. .. .	"	2/6	3/2	2/0	2/8	2/8
Citrate of Iron and Quinine .. .. .	oz.	1/2	1/4	1/4	1/8	1/8



		Banks & Richards	Harris.	Holdsworth.	Jones.	Summer.
Cotton Wool .. .. .	lb.	1/6	2/6	2/6	1/10	2/8
Condyl's Patent Fluid .. ..	gall.	1/8	9/0	5/0	7/6	8/0
Detection of Aloes, Com. Conc. ..	lb.	3/4	3/10	3/6	3/8	4/9
Broom, Conc. .. .. .		2/0	1/6	2/0	2/2	2/0
Epsom Salts .. .. .	cwt.	8/0	8/0	9/0	8/9	9/6
Ergot of Rye, Powdered .. ..	lb.	2/6	3/0	2/6	3/4	3/0
Extract of Belladonna .. ..		6/0	5/6	6/0	5/6	6/10
Colchicum, .. .. .		8/6	9/0	9/0	11/3	12/6
Colocynth, Com. (Corbyn's) ..		28/0	20/0	29/0	30/0	—
Powdered .. .. .		10/6	12/0	33/0	32/0	14/0
Dandelion .. .. .		1/10	2/0	2/0	1/9½	2/10
Ergot Liquid .. .. .		7/0	8/0	7/0	7/3	8/6
Male Fern .. .. .		12/0	10/0	11/0	13/6	32/0
Gentian .. .. .		1/6	1/4	1/4	1/4	1/7
Hemlock .. .. .		2/4	2/4	2/4	2/8	2/10
Hyoscyami .. .. .		5/0	9/6	7/0	8/0	17/0
Faller's Earth, Powdered .. ..		0/1½	0/2	0/2	0/1½	0/3
Glycerine Opt. .. .. .		1/0	0/10	0/10	0/11	2/0
Hellebore, Alb., Powdered .. ..		1/0	0/10	0/8	0/6	0/8
Hembane Leaves .. .. .		3/0	1/6	1/4	1/6	1/0
Honey, English, Opt. .. .. .		0/8	0/8	0/8	0/8	0/9
Ipecacuanha, Powdered .. ..		7/3	7/6	8/0	7/6	8/0
Comp. Powdered .. .. .		5/0	5/0	6/0	6/0	5/0
Iodine .. .. .	oz.	1/1	1/0	1/0	1/0	1/3
Iodide of Potassium .. .. .	lb.	12/0	12/0	12/6	12/6	14/0
Iron, Sulphate, Pure .. .. .		0/4	0/4	0/4	0/3½	0/4
Carbonate .. .. .		0/8	0/8	0/8	0/7½	0/9
Jalap, Powdered .. .. .		4/3	4/6	4/6	3/0	4/9
Compound, Powdered .. ..		2/0	2/6	3/0	2/8	3/0
Lead, Acetate of .. .. .		0/5	0/6	0/6	0/5½	0/11
Lint, Best Cotton .. .. .		2/0	2/3	2/6	2/2	3/6
Linseed Meal .. .. .	cwt.	13/9	13/6	15/0	14/3	16/0
Oil .. .. .	lb.	0/4	0/6	0/4	0/5	0/4
Liquor Arsenicalis .. .. .		0/8	0/9	0/10	0/10	0/10
Bela .. .. .		8/0	6/0	4/0	6/9	8/6
Copaiba Co. .. .. .		3/9	3/0	2/6	3/0	—
Opium, sedative (Battley's) ..		20/0	20/0	20/0	21/0	24/0
Potassa .. .. .		0/3	0/3	0/3	0/4	0/5
Taraxaci .. .. .		2/4	2/0	2/0	2/2	2/10
Vesicatorius .. .. .		5/4	10/0	6/0	9/0	8/6
Liquorice Powder .. .. .		0/9	0/8	0/8	0/7	2/10
Leeches .. .. .	100	10/0	12/0	—	7/6	12/0
Lithia, Carbonate of .. .. .	lb.	33/0	32/0	40/0	45/0	50/0
Mercury, Ammonio-Chloride of ..		2/8	2/8	2/9	2/9	3/0
Bichloride .. .. .		2/3	2/4	2/3	2/3	2/5
with Chalk .. .. .		1/8	1/6	1/8	1/8	1/7
Nitric Oxide .. .. .		2/8	2/8	2/9	2/10	3/2
Ointment, Stroug .. .. .		2/0	1 10	1 10	1/11	2/1
Morphia, Acetate .. .. .	oz.	22/0	21/0	22/0	21/0	26/0
Nitrate of Potass, Pure .. ..	lb.	—	—	—	—	0/9
Powdered .. .. .	cwt.	35/0	37/0	40/0	35/6	40/9
Silver, Sticks .. .. .	oz.	3/10	3/9	3/9	3/11	4/1
Crystals .. .. .		3/9	3/8	3/7	3/9	4/0
Oil of Almonds .. .. .	lb.	1/5	1/4	1/4	1/4	1/6
Anised .. .. .	oz.	0/9	0/8	0/8	0/9	0/10
Juniper .. .. .	lb.	2/4	2/6	2/4	2/4	2/6
Peppermint (Hodgkiss) .. ..		17/0	16/0	16/0	16/3	18/0
Lemon .. .. .		17/0	10/6	10/0	16/6	11/0
Turpentine .. .. .	gall.	2/6	3/0	3/0	2/9	2/9
Ointment of Liquid Pitch .. ..	lb.	1/0	1/0	1/0	1/0	0/10
Galls and Opium .. .. .		4/6	5/0	5/6	5/0	5/4
Opium, Powdered Turkey .. ..		42/0	48/0	48/0	43/0	60/0
Olive Oil .. .. .		0/8	0/9	0/9	0/8	0/10
Pernanganate of Potash .. ..	oz.	0/7	0/6	0/6	0/8	0/6
Powdered Alum .. .. .	cwt.	10/0	10/6	12/0	10/6	9/0
Charcoal .. .. .	lb.	0/6	0/6	0/3	0/4	0/8
Powder of Chalk and Opium .. ..	oz.	0/4½	0/6	4/0	0/4½	6/6
Podophyllin .. .. .		2/9	2/9	2/6	2/8	3/2
Powdered Squills .. .. .	lb.	1/2	1/6	1/0	1/4	1/5
Prepared Chalk .. .. .		0/1½	0/2	0/2	0/2	0/2
Poppy Heads .. .. .	100	1/6	1/9	1/6	1/6	2/2
Plaster of Belladonna .. .. .	lb.	4/6	5/6	6/6	6/6	7/0
Roborans on Linen .. .. .	doz. yds.	5/3	6/0	8/0	9/0	16/9
Soap on Moleskin .. .. .		24/0	18/0	16/0	19/6	22/6
Quinine, Disulphate (Howard's) ..	oz.	5/11	6/0	0/0	0/0	6/9
Quassia Chips .. .. .	lb.	0/3	0/4	0/3	0/3	0/3
Genuine Unbleached .. .. .		—	—	5/4	—	—
Resin, Yellow .. .. .		0/2	0/2	0/2	0/1½	0/2
Rhubarb Powder (E.L.) .. .. .		4/0	4/6	3/6	4/0	12/0
Root, Columba .. .. .		0/7	0/0	0/6	0/0½	1/3
Gentian, Cnt .. .. .		0/6	0/5	0/6	0/5½	0/4
Senega .. .. .		2/8	3/3	3/0	2/6	3/2
Valerian .. .. .		1/0	1/0	1/0	0/9	1/2
Sassafras Resin, Powdered, B.P. ..		25/0	20/0	24/0	26/6	23/6
Senna Leaves (Tinnevely) .. ..		7/10	0/10	0/10	0/6	1/2
Solution of Diacetate of Lead ..		0/4	0/4	0/4	0/3½	0/3
Spirit of Nitre .. .. .		2/6	3/0	3/2	2/8	3/4
Wine, 56 O.P. .. .. .	gall.	21/6	23/0	—	25/6	—
Methylated .. .. .		3/9	4/6	—	5/0	3/9
Spermacti .. .. .	lb.	1/10	1/10	1/9	1/10	1/9
Syrup of Poppies .. .. .		0/8	0/9	0/10	0/9	1/0
Red Poppies .. .. .		0/8	0/9	0/7	0/8½	0/11
Phosphate of Iron Comp. ..		2/0	2/3	2/0	2/6	2/2
Squills .. .. .		0/6	0/0	0/6	0/8½	0/10
strychnine .. .. .	dr.	1/0	1/0	1/3	1/0	1/0
Sulphate of Copper .. .. .	lb.	0/5	0/8	0/4	0/3½	0/4
Zinc .. .. .		0/4	0/6	0/4	0/4½	0/4
Sulphite of Soda .. .. .		0/4	0/6	0/6	0/3½	0/3
Syrup of Iodide of Iron .. ..		1/4	1/8	1/0	1/7	1/9

	Banks & Richards	Harris.	Holdsworth.	Jones.	Summer.
Sulphur, Flowers .. .. .	0/2	0/2	0/2	0/2	0/2
Precipitated .. .. .	0/3	0/8	0/4	0/3	0/2
Soap Liniment .. .. .	0/10	2/0	1/0	2/6	2/6
Sulphurated Potash .. .. .	0/8	0/9	0/8	1/2	2/2
Tartar Emetic .. .. .	1/9	2/0	1/8	2/1	1/10
Tincture of Assafoetida .. ..	2/9	3/0	3/2	3/4	3/4
Aconito (Fleming's) .. ..	4/0	5/6	5/6	6/0	6/4
Belladonna .. .. .	2/0	1/10	2/0	2/4	2/6
Calumba .. .. .	1/9	1/10	2/0	2 1½	2/6
Cardamoms, Comp. .. ..	1/11	1/10	2/4	2/2	2/8
Camphor, Compound .. ..	2/1	1/10	2/4	2 3½	2/6
Cinchona, Compound .. ..	1/8	2/10	3/0	3/0	3/0
Digitalis .. .. .	1/10	1/10	2/0	2/6	2/6
Ergot .. .. .	2/0	2/8	2/6	3/0	3/0
Hemlock .. .. .	1/10	1/10	2/0	2/6	2/6
Henbane .. .. .	1/10	2/4	3/0	2/10	2/6
Iron .. .. .	2/2	2/4	2/6	2/5	2/8
Lobelia Ethereal .. .. .	4/0	4/6	5/0	6/0	6/6
Myrrh .. .. .	2/11	3/0	3/2	3/0	3/4
Catechu .. .. .	1/10	1/10	2/2	2/0	2/6
Hops .. .. .	1/10	1/10	2/0	2/5	2/6
Opium .. .. .	5/6	5/0	5/6	5/6	7/0
Squills .. .. .	1/9	1/10	2/0	2/1	2/4
Rbei. Co. .. .. .	2/8	3/0	3/0	3/0	3/0
Zingib. .. .. .	3/0	3/0	3/2	3/0	3/4
Wine of Opium .. .. .	5/6	5/0	6/0	5/4	7/0
Ipecacuanha .. .. .	2/2	2/0	2/0	2/1	2/8
Colchicum Seeds .. .. .	2/4	1/10	2/0	2/1	2/6
White Wax .. .. .	2/3	2/4	2/2	2/4	2/5
Yellow Wax .. .. .	1/0	1/8	1/11	1/6	2/0
Zinc, Oxide .. .. .	1/4	1/4	1/0	1/6	2/8
Benzozated .. .. .	5/0	5/0	5/0	5/6	5/6

## Correspondence

### THE PROPOSED POISON REGULATIONS

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—I should suppose that, after the very decided and adverse expressions of opinion elicited by the proposed poison regulations, the Pharmaceutical Council will hardly venture to press the proposals, but wisely withdraw them, whilst there is a chance of doing so gracefully. It is somewhat strange that the Society which was forced into existence by a threatened vexatious and frivolous interference with the vested interests of chemists, should become the very agency now threatening the profession with very objectionable and unnecessary restrictions, touching the internal arrangements of our pharmacies.

At the same time, one must not forget the good already achieved by the Society, nor must we be unmindful of the work accomplished by previous councils—oftentimes at great personal inconvenience; and our present council, evidently anxious to promote the best interests of the profession, should generally have our cordial and considerate support, reserving to ourselves the privilege of making a decided stand against any attempts to override the expressed and evident opinions of the majority of pharmacists.

It seems to me that the Council has taken up a false position, and may very easily be impaled on the horns of a dilemma, in this way: either a man is capable of managing his business, or he is not. If he is, then the Council has no right to interfere with him; if not, then the Council had no right to admit him on the register of Chemists and Druggists, or as a Pharmaceutical Chemist. But it may be said, that the Act compelled the Council to register a man already in business, in order not to interfere with vested interests. This may be so, but if the Act compels the Council thus practically to admit the capability of the man, clearly enough it has no right to assume the contrary after registration, and treat him as a child by insisting upon certain arrangements for the keeping of his drugs and chemicals.

But independently of this, let us look a little more closely into the objects of the proposed regulations, and see how far they are likely to answer the purposes intended.



The main idea seems to be the prevention of accidental poisoning. The prevention of criminal poisoning is sufficiently dealt with by the Act itself, although the latter, like most acts connected with pharmacy, is a most inconsistent affair, *e. g.*, sugar of lead, one of the most commonly employed substances in cases of poisoning, is not scheduled, nor carbolic acid, and a host of other patent poisons; thus, logically, it follows that if a man die of an overdose of these poisons, he cannot legally be said to be poisoned, as those scheduled are the only poisons at present recognised by law.

Accidental poisoning naturally divides itself into two branches—

1. Where the public alone are concerned.
2. Where the pharmacist is concerned.

With the first of these branches we have nothing to do, for if Brown poisons Jones, Robinson the pharmacist cannot be held in any way amenable. With the second branch we are deeply concerned, inasmuch as this is the basis of the proposed poison regulations. It is because the pharmacist, for want of presumed proper arrangements, may accidentally poison his customers, that the Pharmaceutical Council most paternally but injudiciously seeks to insist that especial closets, cupboards, bottles, etc., shall be provided for the careful isolation of those substances regarded as poisons by the Pharmacy Act.

Now, we will suppose that the proposed regulations are already in force in, say, a dispensing house, what is more likely to happen than to find the bottles containing Tinct. Opii, Liq. Morphia, or Acid. Hydrarg. left on the counter, because the dispenser knows that he will certainly require them a dozen times before the day is out, and he cannot be constantly locking and unlocking the poison cupboard every time he wants a poison? And thus, being left on the counter, is there anything on earth more inviting or more favourable to an accident than a number of these poisons promiscuously standing at the elbow of a busily employed dispenser?

You can only get over this difficulty by calling the dispensary the poison cupboard. But then this would not isolate the poisons. Indeed the latter enter so freely and continuously into the every-day requirements of a pharmacy, that any attempt to separate them by "rule of thumb" must be attended with very serious complications, and greatly enhance the attendant dangers.

Now suppose the case of an agricultural business where not much, if any, dispensing is done—what is the natural result here? Why, that many innocent but rarely employed substances are put into the poison cupboard as a place of safety, *e. g.*, salicine, santonine, etc.; possibly elbowing the strychnine bottle. Can anything be more conducive to an accident than this? The objection to this idea, of course, is, that no sane man would set up a poison cupboard, and then practically ignore it as such, by the introduction of those bodies not regarded as poisons. To this objection I would say that if you consider a man sufficiently careful not to do this, if you think he has enough self-interest not to commit such an absurdity, then, plainly enough, he has sufficient intellectual capacity to take care of his poisons without the introduction of any vexatious regulations.

But there is another point to be considered. It is evidently the duty of the Council to prove the necessity of the regulations before insisting upon their adoption. How many cases of poisoning have happened during the last year, say, owing to the carelessness of the pharmacist. I believe the percentage is so infinitesimally small, that it may be regarded really as *nil*, and certainly not to be expressed by figures. Consider for a moment the millions of doses of medicine daily swallowed in this country, and how rarely do we hear of an accident caused by the dispenser. Of course, when an accident does happen, it is an extremely regrettable matter, and afterwards we are generally ready enough to suggest preventives; but in truth, the best preventive, and that which the Council should earnestly support and insist upon, is not a mere mechanical arrangement of cupboards, drawers, bottles, and such like, but an *intellectual and well-trained mind*. Let the examinations of the Society be so regulated that each one entering the profession may be imbued with a proper conception of the responsibilities and duties of his position, and we shall very soon have a class of men amongst us who will no more require

the assistance of poison regulations, than a civilised man requires a muzzle to bridle his natural passions.

I must confess that I do not clearly see how the Council intends to enforce the proposed regulations. A staff of informers and inquisitors may be organised, but unless they are armed with very great powers (not at present *in esse*) they cannot legally enter a pharmacy for inspection—a man's poison cupboard may be at the top of the house if he thinks fit to place it there. For myself, I will answer for it, that if I find one of these inquisitorial gentlemen on my premises, I shall very summarily eject him, and he will stand a fair chance of an action at law for trespass.

That accidents will happen as long as men exist cannot be doubted, for *humanum est errare*; at best we can only strive to reduce the number of cases to a minimum, a result to be acquired only by the use of our intellectual faculties, brought to bear in such a way as may be found best suited to the especial requirements of any particular pharmacy. Every mechanical arrangement seems to me to be simply a clumsy and false security.

It must be distinctly understood that I am not advocating that no arrangements should obtain—on the contrary, I cannot too strongly insist that powerful and poisonous remedies should have especial attention; but what I do most emphatically assert is, that the pharmacist, and not the Council, is the proper authority to do this. The latter should confine its attention, so far as internal economies are concerned, to suggestions and recommendations; for it is impossible that it can frame general regulations for the government of every pharmacy, without in some way infringing the liberty of the subject, or otherwise vexatiously interfering with arrangements that have stood the test of time and experience. Depend upon it, a man's own natural interest in the success of his business will always act as a far more powerful stimulant to carefulness and conscientiousness, than all the authoritative restrictions in the world.

The present attitude of the Council, I can compare only to a body of soldiers, who having gained a success after much hard fighting, at once, in the excitement of victory, and for want of more enemies to fight, turn round upon those whom they have been defending, with fixed bayonets and menacing aspect, and insist upon exactions and conditions which would reduce their friends to a sort of passive, but intolerable subjection. No wonder if the latter vigorously kick against the proposed conditions. It would be far more satisfactory if the Council would turn their attention to extending our privileges, and defending our position against co-operative and such like associations. I am told that in London these companies are illegally dispensing prescriptions; if so, let the Council see to it. I should be glad to see the poison schedule greatly enlarged; and most of all, I would rejoice to see a third schedule attached to the Pharmacy Act, which should contain all drugs as contained in an ordinary drug list—to be sold only by pharmacists, conditionally that their name and address be affixed to each packet or bottle. Is it not inconsistent and childish to attempt to isolate and protect oxalic acid, paregoric, or belladonna, whilst sulphuric, carbolic, and nitric acids, acetate of lead, and other potent bodies, may be sold by any old woman without the least let or hindrance?

But above all things, I would ask the Council to refrain from any needless and petty interference with the details of our business, which has already sufficient responsibilities attached to it without being aggravated by the further imposition of restrictive regulations.

E. S.

#### COD-LIVER CREAM.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—The following is worthy of insertion in your journal as an admirable recipe for a preparation that is somewhat extensively vended in several parts of the country under the alluring title of "Cod-Liver Cream."

A quarter of an ounce of clect gum tragacanth steeped in sixteen ounces of cold water for about forty-eight hours, during which time it should be stirred occasionally, yields a fine gelatinous mucilage which, when mixed in any proportion with cod-liver oil and simply shaken with it, permanently diffuses the oil into particles, which in vain struggle for reunion.



It is usual to mix the mucilago and oil in equal parts,\* and it is further only required to sweeten; and add as a preservative and savourer to each ounce of the mixture one drachm of spirits of wine, to which has been added a drop of essence of lemon, the same quantity of essence of almonds, and a trifle of oil of cassia.

Thus is the *mélange* completed, and of so agreeable a flavour is the result, that to most palates it would be found to acquit itself creditably in comparison with an average custard.

I am, &c.,

EMULSIO.

## THE BUSINESS OF THE CHEMIST AND DRUGGIST.

TO THE EDITOR OF THE "CHEMIST AND DRUGGIST."

SIR,—As the Pharmacy Bill seems to be exciting discussion, perhaps I may be allowed to submit a few remarks upon it. The great merit of the Bill is that it raises the standard of education, and guarantees the safety of the public so far as a high standard of education can guarantee it. Its great defect is, that while it increases the cost of education, adds to responsibility, and imposes a number of restrictions and penalties, it gives no equivalent in return. If the Legislature demands an increased investment of capital, talent, and responsibility, it is bound in justice to secure a fair compensation for the investment. Such is not the case now, and chemists and druggists should not rest satisfied until it is. At present the grocer, oilman, draper, stationer, the co-operative store, and others, are all trespassers upon the legitimate business of the chemist and druggist.

Under the new circumstances of his position, he is justly entitled to protection from this sort of competition, at least in its present unlimited form. As he is required by law to specially qualify himself for his business, he has a right to have his business to himself. Part of his business is to sell drugs; and as one qualified to judge or test their quality, it is to the advantage of the public for him to be the sole dealer in them, except in special cases, where a licence to sell drugs, but not to dispense prescriptions, might be allowed.

As regards medical men dispensing their own medicines, perhaps the best means of restraining the practice would be to use every proper means of proving to the public the advantage they would derive from having them dispensed by chemists. In the first place, medical men charge double or treble the price for medicine that the chemist does. In the second place, they are under the temptation to supply more medicine than is required, or to supply it where it is not required in cases where payment is certain. In the third place, they are under the temptation to supply inferior or less medicine than is necessary in cases where payment is uncertain. Finally, there is no check upon medical men in any of these cases. It may be said they are men of education, and bound by religion or by honour. I assert nothing to the contrary; but there is no reason whatever to assume that they are guided by these influences more than chemists and druggists, and yet they are known to be continually asserting to their patients that the integrity of the majority of the latter is to be doubted and distrusted. If medical men think it necessary to instal themselves as umpires between the public and the druggist, it seems quite as reasonable that there should be some check upon medical men. As a moral check, the public should be enlightened as to the truth of the case. As a legal check, every person paying for medical advice should have the right to claim the doctor's prescription for requisite medicines, so as to have the option of obtaining them according to convenience or preference.

As regards prescribing by druggists, I think I may safely assert that they do not wish to prescribe. For many reasons, they would rather dispense medical prescriptions than prescribe themselves.

Why, then, do they prescribe? The principal and the only satisfactory reason is that the public require them to prescribe. Trifling cases of illness are continually occurring, and simple doses of medicine are required where the public

will not incur the charges for medical advice; and if the druggists were prohibited from prescribing, the only result would be that the public would begin to study domestic medicine, and prescribe for themselves. Cases of emergency and necessity also occasionally take place, where it is as much the duty of the druggist to render his assistance as it is the duty of the captain of a ship at sea to avail himself of his medicine chest. In fact, the druggist is a public convenience, and as such his position should be maintained and improved. If any change is made as regards prescribing by druggists, it is probable that the public would wish them not to give up the practice, but to qualify themselves better for it. A lecturer in London recently recommended the admission of women to the medical profession, on the ground that the poor will never be properly attended to until they are admitted. I beg to suggest that chemists and druggists may be made quite as useful to the poor as female practitioners can be; and the poor will prefer their services for many reasons. I submit that it would be as wrong and impracticable to arbitrarily prohibit druggists from prescribing, as it would be to entirely prohibit medical men from dispensing medicine. Taking into consideration all classes of the community, the elevation of the business of the chemist and druggist into a profession of pure pharmacy appears an impossibility.

I am, Sir,

Your obedient servant,

Liverpool, March 21, 1870.

S. H.



E. P. (Mossel Bay, South Africa).—A colonial chemist who wishes to join the Pharmaceutical Society can only do so by passing the examination in London. The possession of a Government certificate will be of no avail.

W. G. asks us six questions, the first five of which are answered in one sentence. All sales of poison (this word including everything which either schedule of the Act mentions) must be labelled with the name of the poison, and with the name and address of the purchaser. Where the purchaser is unknown to the retailer, a witness is required to sign the book in cases which come under the first schedule. The sixth query is, "What is the white, watery looking preparation used as a blister at some hospitals?" Perhaps some of our readers can answer this.

ATHEROSPERMA MOSCHATA. *Subscriber*.—A decoction of the bark of this tree is said to be used in some parts of Australia as a substitute for tea. The bark contains an alkaloid called *atherospermia*, discovered by Zeyer. We cannot give you any information respecting the physiological effects of the decoction.

PRELIMINARY EXAMINATION. J. G.—The questions in the last Examination are printed in the April number of the *Pharmaceutical Journal*, which you will do well to get.

COMMUNICATIONS RECEIVED.—F. Saunders; H. Long; J. Whitfield, F.C.S.; Blankley and Nephews; Edward Smith; M. Rogerson and Son; A. McNaught; T. R. Fraser, M.D. (Nova Scotia), etc. Owing to the pressure of important matter, we are compelled to omit several interesting communications.

H. Long (Croydon).—Your communication arrived when we had far too much matter in type for the number. We shall be glad to receive a brief retrospective notice of the proceedings for publication in our next.

J. Whitfield is thanked for his suggestion.

Preliminary.—The differences you have detected in different editions of "Cæsar" need not alarm you. We should advise you to get the edition published by Whittaker and Co., Ave Maria-lane. The price of the complete work is 5s. 6d.; of Books I. to III., 2s. 6d.

J. K. C.—Parrish's formula occupies two whole pages of his "Practical Pharmacy," and we really have not space for it this month. If you need it before the publication of our next, we will send it you through the post.

J. Ison (Wellington).—You will find three forms for Furniture Cream in Beasley's "Druggists' Receipt Book."

\* A recent examination of several samples revealed the fact that one fourth of oil is a common proportion, while only one-sixth was found in one specimen, the label of which announced the presence of "over eighty per cent. of oil."



*Checketts and Co.*—You will receive an answer through the post.

*Prescription.*—Beasley's "Book of Prescriptions," price 6s. (Churchill) will furnish you with 3,000 examples. Pereira's "Selecta à Prescriptis," price 5s. (Churchill) is the work we would recommend to a student.



[The following list has been compiled expressly for the CHEMIST AND DRUGGIST, by L. de Fontainemoreau, Patent Agent, 4, South-street, Finsbury, London; 10, Rue de la Fidélité, Paris; and 3, Rue des Miuimes, Brussels.]

Provisional Protection for six months has been granted for the following:—

- 365. E. Kruger, of Portobello, Midlothian, North Britain. An improved method of re-utilizing caustic soda lye. Dated 8th February, 1870.
- 445. E. A. Parnell, of Swansea, Glamorgau. Improvements in adapting iron vessels for receiving and conveying sulphuric and other acid liquids. Dated 15th February, 1870.
- 450. I. Mason, of Farnsfield, near Southwell, Nottingham. Improvements in apparatus for measuring oil and other liquids. Dated 16th February, 1870.
- 478. C. A. Roger and C. M. Gallet, both of Paris. Improvements in the manufacture of stoppers for bottles of all kinds. Dated 18th February, 1870.
- 485. I. Baggs, of High Holborn. Improvements in the manufacture of the carbonates of ammonia. Dated 18th February, 1870.
- 498. J. H. Johnson, of London. Improvements in the obtainment or production of oxygen gas. Dated 19th February, 1870.
- 515. W. R. Lake, of London. A method of producing an improved black pigment, and obtaining phosphates and other substances from the waste portions of the hop plant. Dated 22nd February, 1870.
- 553. H. Bessemer, of Queen-street-place. Improvements in the construction of steam vessels and sailing vessels, and in apparatus employed for the better accommodation of passengers on board such vessels, and for lessening or preventing sea-sickness. Dated 24th February, 1870.
- 590. H. W. Dee, of Sherwood-street. Improvements in caps for scent and other bottles or vessels. Dated 28th February, 1870.
- 598. T. Rowatt, junior, of Edinburgh. Improved means and apparatus for testing petroleum and other oils. Dated 1st March, 1870.
- 640. W. E. Gedge, of London. An improved syringe for sub-cutaneous extractions and injections. Dated 4th March, 1870.
- 668. J. Hargreaves, of Appleton-within-Widnes, and T. Robinson, of Widnes, Lancaster. Improvements in the manufacture and application of chlorine, and in apparatus employed therein. Dated 7th March, 1870.
- 673. W. E. Newton, of London. Improved apparatus for injecting and reducing liquids to a state of spray or minute subdivision. Dated 7th March, 1870.
- 684. C. H. Williams, of Westbury-on-Severn, Gloucester. Improvements in means for curing skin diseases in animals. Dated 8th March 1870.
- 700. G. A. Tatro, of Hartford, Connecticut, United States of America. An improved process for converting the whole product arising from the distillation of crude petroleum into a safe burning oil. Dated 10th March, 1870.
- 713. J. J. Lundy, of Leith, near Edinburgh. Improvements in effecting the decolorization, decolorization, and purification of foul and waste waters of sewage, and of supernatant sewage water. Dated 10th March, 1870.
- 819. G. W. Fox, of Manchester. Improvements in the treatment of cod-liver, castor, and other medicinal oils, in order to render the same more palatable. Dated 19th March, 1870.

Letters Patent have been issued for the following:—

- 2610. J. Hargreaves, of Preston, Lancaster. Improvements in extracting phosphoric acid and phosphorus from the tap cinder of puddling furnaces and iron refineries, and from other compounds of iron and phosphorus. Dated 4th September, 1869.
- 2616. C. F. Claus, of Middlesbrough-on-Tees, York. Improvements in the manufacture of carbonate of soda, and in the recovery of waste products resulting therefrom, and in the construction of apparatus to be employed for such purposes. Dated 6th September, 1869.
- 2667. B. Kershaw, of Warwick-place, Maida-hill. Improvements in the construction of vessels or apparatus for preserving meat and other articles of food. Dated 11th September, 1869.
- 2744. J. Jacobi, of Kladno, Bohemia. An improved process for removing phosphates from ores, and for utilising these phosphates. Dated 21st September, 1869.
- 2746. A. V. Newton, of London. An improvement in the treatment of spirits or alcoholic liquids for the purification of the same, and apparatus therefor; a part of which invention is also applicable to the separation of the lighter from the heavier particles of oils and other liquids. Dated 21st September, 1869.
- 2771. J. M. and J. B. Sponce, both of Manchester. Improvements in the manufacture of disinfectants, applicable also to the preservation of manures. Dated 23rd September, 1869.
- 2795. J. Stuart, of Limhouse. Improvements in the treatment of the ores of metals and their products, and in the manufacture of the oxides of the metals, and of the carbonates of the oxides of

the metals, and of the metals themselves; also in the manufacture of soda and its carbonates, and of potash and its carbonates. Dated 25th September, 1869.

- 2818. C. D. Abel, of London. The production of a new or improved green colouring matter for dyeing and printing. Dated 28th September, 1869.
- 3335. G. F. Cornelius, of Westminster. Improvements in the manufacture of paint and varnish. Dated 19th November, 1869.
- 3505. H. Larkin, of Torrriano Cottages, Leighton-road, and W. White, of Hampstead. Improvements in the production of potassium, sodium, and zinc. Dated 3rd December, 1869.
- 3752. G. Spencer, of Cannon-street. Improvements in the construction and conformation of certain machinery and apparatus, and processes for the preservation of animal and vegetable substances, parts of which may be applied to other useful purposes. Dated 28th December, 1869.

Specifications published during the month. Postage 1d. each extra:—

- 1840. J. T. Masbon. Apparatus for carrying invalid persons, etc. 10d.
- 2110. F. J. Smith and L. J. Abbott. Aërated drinks. 4d.
- 2137. J. T. A. Mallet. Charging atmospheric air with oxygen. 10d.
- 2153. A. Rollason. Treating ammoniacal gas liquor. 8d.
- 2190. J. Rehse. System for the cure of stammering. 4d.
- 2241. J. H. Johnson. Purifying alcohol and paraffine. 4d.
- 2245. W. Mort. Refrigerating and freezing apparatus. 10d.
- 2274. J. Winslip. Medicated paper. 4d.
- 2306. B. Goddard and W. Finley. Making pills, etc. 4d.
- 2331. T. Livesey and T. Abbott. Boiling slize. 8d.
- 2345. E. Beanes. Preserving food. 4d.
- 2364. W. E. Newton. Purifying alcohol, etc. 1s. 2d.
- 2384. R. Longdon. Safes and refrigerators. 4d.
- 2403. C. Crossley, R. Whipp, and T. Crossley. Manufacture of size. 4d.
- 2408. A. M. Clark. Manufacture of phosphate of ammonia. 4d.



**W**HETHER circumstances have favoured Mr. Lowe, or whether he has conquered circumstances, is a question, we may leave to partisans to discuss. Certainly the success of his 1869 Budget is now beyond question, and founded as it was on true commercial principles, has introduced into our public department a spirit of business-like promptitude, which, while it has already given us a handsome result in the way of remitted taxation, will bear still more abundant fruit in years to come.

It is quite unnecessary that we should go into the details of the Budget of this year. We refer to it chiefly to point out how strongly it proves the recovery of this country from the long and severe depression with which our commerce has been visited. There are departments of trade still which are not in a prosperous condition, and this must always be the case; but it is not to be doubted that generally our markets are most satisfactory, and we earnestly hope that with the exercise of ordinary prudence such disasters as we have known may be averted for the future.

One of the most important reductions which the new Budget makes, not so much in amount as in daily social effect, is the alteration of the postage regulations for printed matter. Tradesmen will find the half-penny postage a most valuable benefit to them, as the means it will give them of addressing their customers by circulars will no doubt be taken advantage of. We believe that in the end the Post Office will be a considerable gainer by this innovation, and the public will in many ways experience its advantages. There are a few bad-tempered people who complain now of the flood of circulars which reach them. They, perhaps, hardly know yet the troubles which await them in the future.

Prices have fluctuated to some considerable extent since our last. The changes have been generally in favour of sellers, as a tolerably active demand for many of the chief drugs and chemicals, and a supply not beyond the average, has generally characterised our sales.

#### CHEMICALS.

Citric Acid has advanced 1d., and is firmly held at 2s. 5d. to 2s. 6d. Tartaric is steady. Bleaching Powder is 1s. per cwt. dearer. A steady demand for Saltpetre during the month has occasioned an advance of nearly 1s. per cwt. It is now quiet. Soda Crystals and Bicarbonate have made higher prices, but Potash and its Salts seem on the turn the other way. Other prices are unchanged.



## DRUGS.

**ALOES.**—Cape, 159 packages offered. Prices are again rather easier, some good and fine having sold 28s. to 28s. 6d., fair 25s. 6d. down to 21s. 6d. per cwt. for drossy and inferior; 33 boxes and 6 kegs refined of hepatic character sold well, bringing 48s. to 56s. for rather drossy to good, and 31s. for pieces; but more latterly 26 boxes of similar kind sold at rather less prices, inferior 17s. up to 47s. for good yellow. East India: 8 boxes Socotrine rather dark sold at £9 10s., part bought in at £12 for good hard, 2 boxes in skins sold at 57s. 6d. to 60s., 11 casks middling quality bought in at £5 per cwt. Ambergris is held for 30s. to 32s. per oz., and not much offering. Bees' Wax sells readily. 23 cases Madras sold as follows: fair white, £9 15s., dull yellow £8 7s. 6d. to £8 10s.; 4 cases white in eake bought in at £10 10s.; 3 packages good mixed Australian sold at £9 per cwt. Buchu leaves: only 2 bales of very inferior offered, and bought in at 1d. per lb. Camphor, the advance of which, owing to a speculative demand we last month intimated could only be temporary, moves slowly at rather under last month's quotations; China, of 150 boxes and 136 tubs at sale, 17th ultimo, only 20 tubs sold under the hammer at 90s., since then it has been selling at same figure, and the boxes at 2s. 6d. less, with a small business afloat at 87s. 6d. Our stock is 5,918 packages against 2,708 last year. Cardamons have been in better demand. Early in the month 12 cases Malabar good mixed, a little wormy, sold at 8s. 8d. to 8s. 11d., rather darker 8s. 5d.; and 21 cases Aleppy at 8s. 6d. to 8s. 7d., being dearer; at the last sales 9 cases fair quality little mixed realised 8s. 5d. to 8s. 8d.; but of 24 cases Malabar 7 cases only sold, brown at 8s. 8d. and mixed at 8s. 5d., remainder withdrawn at 9s. 3d. for picked, since sold at 8s. 11d. per lb. Ceylon, 12 cases sold without reserve at 2s. 7d. per lb. for fair to partly clean. Stock, 125 packages against 76 last year. Coculus Indicus is rather lower; of 221 bags Cochin offered early in the month 196 bags sold at 19s., 1 lot at 21s., the remainder bought in at 22s. per cwt. Stock 1,669 bags, against 1,448 bags last year. Cubebs are only slowly selling; at the drug sales of the 17th March, of 118 bags offered 93 bags of fair quality sold at 35s.; but on the 31st 143 bags Singapore and Batavia were all bought in, the former at 33s. to 35s., and the latter at 40s. Dragons' blood: good quality sells readily; 1 case fine bright drop sold at £17, 1 case small bright £7 15s., 1 case medium lump £5 5s., 3 cases good reed were bought in at £13, and 6 cases bricky at 97s. 6d. per cwt. Stock 177 cases against 213 cases in 1869. Musk sells fairly. Early in the month 17 caddies Tonquin, 1st pile, good even pods brought 34s. to 35s. 6d. per oz.; and of 16 caddies Caberdine, one-half sold at 17s. to 17s. 6d.; and 1 tin of fine grain 55s., out of 12 offered, dark being taken out at 44s. to 45s.; latterly 31 caddies Tonquin pickings were bought in at 20s., and 9 caddies Caberdine at 17s. 6d. to 18s.; 4 tins middling to fine grain sold at 43s. to 55s. 6d. per oz. Nux Vomica: only 92 bags Madras at sale, part of which sold at 12s. per cwt. Senna: Tinnevely, the demand is very good, and of 237 bales the bulk sold fair leaf 8½d., small and rather yellow 4d. to 6½d., down to 3½d. for ordinary. Soy is dull; and nearly all the recent offerings, 236 barrels, were bought in at 2s. 9d. to 2s. 10d. per gallon. Tamarinds sell slowly, unless very good, and then only 15s. to 16s. per cwt. is obtainable; 278 casks at sale, mostly sold, made merchantable at 8s. to 16s., down to 4s. 6d. for 4th class mouldy and perished. Rhubarb: good qualities are in demand, and much wanted. 218 cases offered during the month, but only 50 cases were of new import per overland, ex *Delhi* and *Poonah*, round fair coat, good pinky fracture, sold 4s. 5d. to 4s. 7d.; flat, hardly so good fracture, 4s. to 4s. 1d.; round, fair pinky fracture, but mixed with a little dark, 4s. 1d. to 4s. 3d.; 169 chests of o'd import was generally withdrawn. Some rather rough coat and horny sold at 2s. 6d., and very inferior as low as 10d. Calumba root: 259 packages offered and partly sold, rather dull and a little wormy and musty 33s. 6d., smaller 20s. to 21s., part withdrawn at 35s. of fair quality. China root: 257 bales, only a small portion sold 38s.; but sales subsequently made of a further portion.

Gum Arabic sells readily at higher rates, especially for the better qualities. Australian has arrived very freely of late, and will soon be put on the market. Myrrh: Good,

very scarce; of 32 packages brought to sale scarcely anything sold, except the low and ordinary pickings and inferior siftings, the bulk being bought in at £7 10s. to £12 10s. for drossy sorts to good pale, fine siftings £6 15s., small do. £6, good pickings 76s. to 80s. Olibanum: Much wanted, waiting arrivals; only 7 cases of second-hand have been brought to sale, and were bought in at 75s. for reddish and yellow drop. Arrivals may be looked for on change of wind, and 4,214 cases are afloat against 2,835 cases last year. Stock, 1,030 cases against 1,639 cases. Canada and Capivi Balsams are cheaper, but Tolu is higher. Jamaica Sarsaparilla has advanced considerably, but Jalap is declining. In other drugs prices are firm.

## DRYSALTERIES.

Argol: Cape sells steadily; 32 bags fair rather dusty 60s. 6d. to 65s., pinky 55s. per cwt. Cutch: There has been rather more inquiry of late, and 250 boxes good Pegue sold last week at 25s. per cwt., but 853 cases from Calcutta were bought in at 24s. per cwt. Stock, 1,618 tons against 1,359 tons last year. Gambier is quiet, and out of 2,897 bales, 750 mats, and 637 bags in public sale last week, only 250 bales were disposed of at 18s. 3d. to 18s. 6d. for good pressed cubes, and 16s. 9d. to 17s. 6d. for middling block, good a little blocky bought in 20s. Stock, 3,660 tons against 5,029 tons. Galls are held firmly. 180 chests China rather small and broken were withdrawn at 51s. per cwt. 25 cases Japan pickings were bought in at 44s. per cwt.; present quotation for China is 49s. to 50s., and Japan about same price. Lac Dye: Market steady but quiet. Safflower is very quiet, and common descriptions are lower. Red Saunders Wood: Nothing offered. Turmeric is rather easier.

## DYEWOODS.

At auction about 15 tons Carthagea Fustie sold at £4 10s. to £4 12s. 6d., and 11 ton small Nicaragua Wood at £6 12s. 6d. per ton. By private, 130 tons Jamaica Logwood at £4 5s. per ton ex quay.

## OILS.

Linseed, owing more to the limited supply than to any particular activity in the demand, has continued firm, and is not obtainable under £32 10s. on the spot, and there are buyers for the summer months at £33 10s. Rape Oil has been in steady but not active request, and prices of English brown on the spot have fluctuated between £42 10s. and £43, the present value being £42 10s. to £42 15s.; business has been done July-August at £42 10s., and for September-December at £41 to £41 10s. Refined is £45, and foreign £46 to £46 10s. Refined Cotton has continued dull, and has been sold on the spot at £35 10s., and Hull has been sold at £34 5s. to £34 10s. The demand for Olive has remained inactive, and prices are nominally £56 for Gioja, down to £52 10s. for Mogador. As regards Coconut, no transactions worth mentioning have taken place in fine Cochin at £46 nor in Ceylon at £42, but about 60 tons low to fair Sydney have changed hands at £36 10s. to £39. 60 casks Cochin, all that was offered by auction, were bought in at £46. Palm Oil, of which none has been brought forward in public sale, has again moved off slowly, with sellers of fine Lagos at £40 10s. Of 36 casks Palm-nut kernel 9 casks fair sold at £38 5s. Sperm is in more request, and dearer. Of 40 tuns American a part sold at £92 10s., at which price the remainder was bought in, and Headmatter at £93. Whale has met more inquiry, and about 30 tuns pale colour have been recently sold at £38 to £40. For pale Seal £43 is still required. 17 tuns Labrador Seal bought in, tinged £41, straw £40 10s. 60 tuns Whale chiefly sold, double compass £40, single cloudy £31, nick £30, stroke £29 10s. to £29 15s. 9 tuns Seal and Whale bought in at £35 to £38 for inferior to single compass. 5 tuns Penguin sold, nick and single compass, £30. 10 tuns Newfoundland Cod sold at the advanced rate of £41 to £40 15s.

Petroleum has been in only moderate request, at 1s. 8d. to 1s. 8½d. for American refined, according to test. For the last four months there are sellers at 1s. 8d. and buyers at 1s. 7½d. Our stock is 9,939 barrels and 12,494 cases, and the deliveries last week were equal to 1,151 barrels, against 11,625 and 500 barrels respectively same time last year. Fine Coal Oil is in steady demand at 1s. 7d. to 1s. 7½d., but the lower qualities are unsaleable. No change in naphtha.



## Monthly Price Current.

[The prices quoted in the following list are those actually obtained in Mining lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.]

CHEMICALS.	1870.		1869.	
	January.	s. d.	January.	s. d.
<b>ACIDS—</b>				
Acetic .....per lb.	0 4 to	0 0	0 4 to	0 0
Citric .....per lb.	2 5 ..	2 6	2 7½ ..	2 8
Hydrochlor. ....per cwt	4 0 ..	7 0	4 0 ..	7 0
Nitric .....per lb.	0 5 ..	0 5½	0 5 ..	0 5½
Oxalic ..... "	0 7½ ..	0 0	0 8 ..	0 0
Sulphuric ..... "	0 0½ ..	0 1	0 0½ ..	0 1
Tartaric crystal .. "	1 2½ ..	0 0	1 3 ..	0 0
powdered .. "	1 2½ ..	0 0	1 3½ ..	0 0
<b>ANTIMONY ore.....per ton</b>				
crude .....per cwt	260 0 ..	300 0	300 0 ..	320 0
regulus..... "	36 0 ..	0 0	25 0 ..	26 0
star ..... "	70 0 ..	0 0	48 0 ..	50 0
"..... "	72 0 ..	0 0	48 0 ..	50 0
<b>ARSENIC, lump..... "</b>				
powder..... "	16 0 ..	16 6	16 0 ..	16 6
"..... "	7 3 ..	7 6	7 9 ..	8 0
<b>BRIMSTONE, rough...per ton</b>				
roll .....per cwt	160 0 ..	0 0	165 0 ..	0 0
flour..... "	11 0 ..	0 0	12 0 ..	0 0
"..... "	12 0 ..	13 0	14 0 ..	0 0
<b>IODINE, dry .....per oz.</b>				
Ivory Black, dry...per cwt.	0 9 ..	0 9½	0 9 ..	0 10
MAGNESIA, calcined...per lb.	0 0 ..	0 0	0 0 ..	0 0
MERCURY.....per bottle	1 2 ..	0 0	1 6 ..	1 8
MINIUM, red .....per cwt.	137 0 ..	138 0	137 6 ..	0 0
orange ..... "	20 9 ..	21 0	20 9 ..	21 0
"..... "	31 6 ..	32 6	32 6 ..	33 6
PRECIPITATE, red...per lb.	2 6 ..	0 0	2 6 ..	0 0
white .. "	2 5 ..	0 0	2 5 ..	0 0
PRUSSIAN BLUE .. "	0 0 ..	0 0	1 0 ..	1 10
<b>SALTS—</b>				
Alum .....per ten	145 0 ..	150 0	145 0 ..	150 0
powder .. "	165 0 ..	170 0	165 0 ..	170 0
<b>Ammonia:</b>				
Carbonate .....per lb.	0 5½ ..	0 6	0 5½ ..	0 6
Hydrochlorate, crude,				
white.....per ton	480 0 ..	560 0	500 0 ..	510 0
British (see Sal Ammoniac)				
Sulphate .....per ton	320 0 ..	330 0	330 0 ..	335 0
Argol, Cape .....per cwt	42 6 ..	0 7 6	70 0 ..	85 0
France ..... "	55 0 ..	58 0	45 0 ..	60 0
Oporto, red .. "	22 0 ..	24 0	24 0 ..	25 0
Sicily .. "	32 0 ..	40 0	45 0 ..	50 0
Naples, white .. "	0 0 ..	0 0	55 0 ..	65 0
Florence, white .. "	0 0 ..	0 0	70 0 ..	75 0
red .. "	0 0 ..	0 0	60 0 ..	65 0
Bologna, white .. "	0 0 ..	0 0	0 0 ..	0 0
<b>Ashes (see Potash and Soda)</b>				
Bleaching powd...per cwt.	9 3 ..	9 6	10 6 ..	10 9
Borax, crude .. "	25 0 ..	40 0	25 0 ..	35 0
(Tinical) .. "	55 0 ..	65 0	30 0 ..	52 0
British refud. .. "	68 0 ..	70 0	66 0 ..	67 0
Calomel .....per lb.	2 5 ..	0 0	2 5 ..	0 0
<b>Copper:</b>				
Sulphate .....per cwt.	23 6 ..	24 0	24 9 ..	25 0
Copperas, green...per ton	56 2 ..	60 0	52 6 ..	60 0
Corrosive Sublimate...p.lb.	1 11 ..	0 0	1 11 ..	0 0
Cr. Tartar, French, p. cwt.	83 0 ..	84 0	89 6 ..	90 0
Venetian grey .. "	83 0 ..	0 0	0 0 ..	0 0
brown .. "	0 0 ..	0 0	62 6 ..	72 6
Epsom Salts ....per cwt.	6 0 ..	7 0	8 0 ..	8 6
Glauber Salts .... "	4 6 ..	6 0	5 6 ..	6 0
<b>Lime:</b>				
Acetate, white, per cwt.	12 6 ..	23 0	12 6 ..	25 0
Magnesia: Carbonate .. "	42 6 ..	0 0	42 6 ..	0 0
<b>Potash:</b>				
Bichromate .....per lb.	0 5½ ..	0 0	0 5 ..	0 5½
<b>Carbonate:</b>				
Potashes, Canada, 1st				
sort .....per cwt.	31 9 ..	32 0	32 0 ..	0 0
Pearlashes, Canada, 1st				
sort .....per cwt.	32 9 ..	33 0	32 0 ..	0 0
Chlorate .....per lb.	0 9½ ..	0 10	1 0 ..	0 0
Prussiate .....per lb.	1 0 ..	0 0	1 0 ..	0 0
red .. "	1 9½ ..	1 10	1 9½ ..	1 10
<b>Tartrate (see Argol and Cream of Tartar)</b>				
<b>Potassium:</b>				
Chloride .....per cwt.	8 0 ..	0 0	7 10 ..	8 0
Iodide.....per lb.	11 0 ..	12 0	12 0 ..	0 0
<b>Quinine:</b>				
Sulphate, British, in				
bottles .....per cz.	5 10 ..	6 0	5 9 ..	0 0
Sulphate, French .. "	5 8 ..	0 0	5 3 ..	0 0
Sal Acetate .....per lb.	0 10 ..	0 0	0 10½ ..	0 0
Sal Ammoniac, Brit. cwt.	41 0 ..	42 0	36 0 ..	38 0
<b>Saltpetre:</b>				
Bengal, 6 per cent. or				
under .....per cwt.	24 6 ..	25 0	24 9 ..	25 0
Bengal, over 6 per cent.				
per cwt.	22 6 ..	24 0	23 9 ..	24 6
Madras..... "	21 9 ..	22 0	0 0 ..	24 0
Bomb & Kurracheep.ct.	0 0 ..	0 0	0 0 ..	0 0
European..... "	25 0 ..	26 0	25 3 ..	25 6
British, refined .. "	27 0 ..	27 6	23 6 ..	29 0
Soda: Bicarbonate, p.cwt.	10 0 ..	0 0	10 9 ..	0 0
<b>Carbonate:</b>				
Soda Ash.....per deg.	0 1½ ..	0 1½	0 1½ ..	0 2
Soda Crystals per ton	85 0 ..	90 0	82 0 ..	85 0

Soda:	1870.		1869.	
	s. d.	s. d.	s. d.	s. d.
Hyposulphite...per cwt.	13 6 to	14 0	18 0 to	0 0
Nitrate .....	17 0 ..	17 6	15 9 ..	16 6
SUGAR OF LEAD, White, cwt.	39 0 ..	40 0	40 0 ..	42 0
Brown .....	26 0 ..	28 0	29 0 ..	30 0
<b>SULPHUR (see Brimstone)</b>				
VERDIGRIS .....per lb.	1 0 ..	1 2	0 11 ..	1 1
VERMILION, English...per lb.	2 4 ..	2 6	2 6 ..	3 0
China..... "	3 0 ..	3 1	2 8 ..	0 0
<b>DRUGS.</b>				
ALOE, Hepatic....per cwt.	60 0 ..	160 0	80 0 ..	180 0
Socotrine .. "	100 0 ..	220 0	120 0 ..	260 0
Cape, good.. "	27 6 ..	28 6	29 0 ..	33 0
Casearilla .. "	17 0 ..	26 0	16 0 ..	28 0
Barbadoes .. "	80 0 ..	220 0	70 0 ..	190 0
AMBERGRIS, grey.....oz.	27 6 ..	30 0	27 6 ..	32 6
<b>BALSAMS—</b>				
Canada .....per lb.	0 10½ ..	1 0	1 3 ..	0 0
Capivi .....	1 9 ..	1 11	1 2 ..	2 3½
Peru .....	7 8 ..	7 10	11 0 ..	11 6
Tolu .....	2 6 ..	2 8	2 3 ..	0 0
<b>BARKS—</b>				
Canella alba ....per cwt.	22 0 ..	34 0	30 0 ..	40 0
Casearilla .....	20 0 ..	34 0	23 0 ..	35 0
Peru, crow & grey per lb.	0 10 ..	2 4	0 10 ..	1 11
Calisaya, flat .. "	3 6 ..	3 8	2 10 ..	3 6
quill .. "	3 6 ..	3 7	2 8 ..	3 3
Carthagea .. "	1 0 ..	1 9	0 10 ..	1 6
Pitayo .....	0 10 ..	1 6	0 8 ..	1 4
Red .....	1 6 ..	7 0	2 0 ..	9 0
Bucho Leaves .....	0 3 ..	0 6	0 4 ..	0 8
CAMPOR, China...per cwt.	87 6 ..	0 0	115 0 ..	0 0
Japan .....	90 0 ..	0 0	120 0 ..	0 0
Refin Eng. per lb.	1 3½ ..	0 0	1 8 ..	0 0
CANTHARIDES .....	4 0 ..	0 0	2 2 ..	2 3
CHAMOMILE FLOWERS p. cwt	40 0 ..	72 6	60 0 ..	100 0
CASTOREUM .....	4 0 ..	32 0	5 0 ..	32 0
DRAGON'S BLOOD, lump .. "	87 6 ..	200 0	100 0 ..	190 0
<b>FRUITS AND SEEDS (see also Seeds and Spices.)</b>				
Anise, China Star pr cwt.	120 0 ..	125 0	110 0 ..	0 0
German, &c. .. "	28 0 ..	40 0	26 0 ..	38 0
Beans, Tonquin .. per lb.	0 10 ..	1 6	1 2 ..	1 6
Cardamom, Malabar				
good .. "	7 10 ..	8 11	7 9 ..	8 6
inferior .. "	6 6 ..	7 6	5 6 ..	7 0
Madras .. "	5 0 ..	8 0	4 6 ..	8 3
Ceylon .. "	2 6 ..	2 10	2 8 ..	3 0
Corozo Nuts....per cwt.	12 0 ..	15 0	15 0 ..	18 0
Cassia Fistula.. "	16 0 ..	35 0	15 0 ..	28 0
Castor Seeds .. "	10 6 ..	12 0	11 0 ..	13 0
Cocculus Indicus .. "	19 0 ..	22 0	26 0 ..	28 0
Colocyath, apple...per lb.	0 4½ ..	0 8	0 6 ..	0 10
Croton Seeds .. per cwt.	46 0 ..	55 0	65 0 ..	72 0
Cubebs .....	27 6 ..	42 6	40 0 ..	42 0
Cummin .....	0 0 ..	110 0	38 0 ..	48 0
Dividivi .....	10 6 ..	12 6	10 6 ..	12 6
Feuugreek..... "	13 0 ..	15 0	9 0 ..	14 0
Guinea Grains .. "	31 6 ..	34 0	38 0 ..	39 6
Juniper Berries .. "	7 6 ..	8 6	7 0 ..	8 0
Myrobalans .... "	8 0 ..	16 6	9 6 ..	17 0
Nux Vomica..... "	10 0 ..	14 0	10 0 ..	13 0
Tamarinds, East India .. "	9 0 ..	14 0	20 0 ..	28 0
West India, new .. "	12 0 ..	22 0	16 0 ..	30 0
Vanilla, large ....per lb.	24 0 ..	32 0	14 0 ..	18 0
inferior .. "	12 0 ..	22 0	8 6 ..	12 0
Wormseed .. per cwt.	35 6 ..	0 0	25 0 ..	30 0
<b>GINGER, Preserved, in bond</b>				
(duty 1d. per lb.) per lb.	0 6 ..	0 8	0 6 ..	0 10
<b>GUMS (see separate list)</b>				
HONEY, Narbonne .. "	30 0 ..	47 0	30 0 ..	35 0
Cuba .... "	22 0 ..	36 0	21 0 ..	36 0
Jamaica.. "	31 0 ..	55 0	25 0 ..	45 0
IPECACUANHA .. "	6 9 ..	7 0	7 6 ..	7 10
ISINGLASS, Brazil.. "	2 11 ..	4 5	3 1 ..	3 4
Tongue sort .. "	3 2 ..	4 9	3 3 ..	5 1
East India .. "	1 10 ..	3 11	2 3 ..	4 0
West India .. "	4 0 ..	4 6	3 8 ..	4 0
Russ. long staple .. "	5 0 ..	8 0	5 0 ..	7 6
" leaf .. "	3 0 ..	5 0	0 0 ..	0 0
" Simovia .. "	1 6 ..	2 6	1 6 ..	2 6
JALAP, good .....	2 8 ..	3 4	3 4 ..	4 3
infer. & stems .. "	0 6 ..	2 7	0 6 ..	3 2
LEMON JUICE ... per degree	0 1 ..	0 1½	0 1 ..	0 1½
LIQUORICE, Spanish per cwt.	60 0 ..	65 0	63 0 ..	68 0
Italian .. "	48 0 ..	63 0	48 0 ..	67 0
MANNA, flaky ....per lb.	3 0 ..	3 6	3 0 ..	3 6
small..... "	1 6 ..	1 9	1 3 ..	1 9
MUSK.....per oz.	19 0 ..	35 6	24 0 ..	36 0
<b>OILS (see also separate List)</b>				
Almond, expressed per lb.	1 0 ..	0 0	1 3 ..	0 0
Castor, 1st pale .... "	6 4½ ..	0 0	0 5½ ..	0 6
second .. "	0 4½ ..	0 0	0 5½ ..	0 0
infer. & dark .. "	0 4½ ..	0 0	0 4½ ..	0 5
Bombay (in casks) .. "	0 4 ..	0 4½	0 4½ ..	0 0
Cod Liver .....per gall.	5 0 ..	6 3	4 0 ..	6 0
Crotou.....per oz.	0 3 ..	0 4	0 3 ..	0 4
<b>Essential Oils:</b>				
Almond .....	42 0 ..	0 0	40 0 ..	0 0
Anise-seed .....per lb.	8 8 ..	8 9	9 6 ..	9 9
Bay .....	65 0 ..	70 0	70 0 ..	80 0
Bergamot .....per lb.	8 0 ..	15 0	11 0 ..	18 0
Cajuput, (in bond) per oz.	0 1½ ..	0 2	0 1½ ..	0 2
Caraway .....per lb.	5 6 ..	6 3	5 3 ..	5 6
Cassia .....	4 10 ..	5 0	5 4 ..	5 6
Cinnamon .....per oz.	1 0 ..	4 6	1 0 ..	4 0



1870.				1869.				1870.				1869.				
Essential Oils, continued:—								Oils, continued:—								
s.	d.	s.	d.	s.	d.	s.	d.	£	s.	£	s.	£	s.	£	s.	
Cinnamon-leaf . . . per oz.	0	4	0	0	6	0	0	COD . . . . .	40	10	41	42	10	43	0	
Citronelle . . . . .	0	2½	0	2½	0	2½	0 3½	WHALE, South Sea, pale	39	0	40	0	0	0	0	
fine . . . . .	0	8	0	0	0	3	0 4	yellow	38	0	0	0	0	0	0	
Clove . . . . . per lb.	2	7	0	0	2	9	0 0	brown	36	0	37	0	0	0	0	
Juniper . . . . .	1	9	2	0	1	9	2 0	East India, Fish	32	0	33	0	31	0	32	0
Lavender . . . . .	3	0	4	3	2	9	8 0	OLIVE, Galipoli . . . . .	57	0	0	0	53	0	0	0
Lemon . . . . .	5	0	7	0	4	0	8 0	Trieste . . . . .	56	0	0	0	52	0	0	0
Lemongrass . . . per oz.	0	3½	0	4	0	4½	0 5	Levant . . . . .	54	0	55	0	47	0	43	0
Neroli . . . . .	0	5	0	6	0	0	0 0	Mogador . . . . .	52	10	53	0	46	10	0	0
Nutmeg . . . . .	0	5	0	10	0	4	0 7½	Spanish . . . . .	0	0	0	0	49	0	49	10
Orange . . . . . per lb.	5	0	7	0	5	0	8 0	Sicily . . . . .	0	0	0	0	49	0	0	0
Otto of Roses . . . per oz.	13	0	20	0	15	0	20 10	COCONUT, Cochinchina . . . per ton	45	10	46	0	50	0	48	0
Peppermint:								Ceylon . . . . .	42	0	0	0	47	10	46	10
American . . . per lb.	14	0	15	6	19	0	20 6	Sydney . . . . .	35	0	40	0	46	0	45	0
English . . . . .	32	0	42	0	33	0	43 0	GROUND NUT AND GINOELLY:								
Rosemary . . . . .	1	9	2	0	1	9	2 0	Bombay . . . . .	0	0	0	0	40	0	0	0
Sassafras . . . . .	4	0	4	6	3	6	4 0	Madras . . . . .	43	0	0	0	0	0	0	0
Spearment . . . . .	4	0	16	0	14	0	13 0	PALM, fine . . . . .	40	10	0	0	41	0	0	0
Thyme . . . . .	1	10	2	0	1	10	4 0	LINSEED . . . . .	32	10	0	0	29	10	29	15
Mace, expressed . . . per oz.	0	1	0	2½	0	0½	0 2½	RAPESEED, English, pale . . .	45	0	0	0	35	10	0	0
OPIMUM, Turkey . . . per lb.	35	0	36	0	40	0	43 0	brown . . . . .	42	10	42	15	33	10	0	0
inferior . . . . .	25	0	33	0	29	0	38 0	Foreign pale . . . . .	46	0	40	10	36	10	0	0
QUASSIA (bitterwood) per ton	140	0	150	0	120	0	130 0	brown . . . . .	45	0	0	0	31	10	0	0
RHUBARB, China, good and								COTTONSEED . . . . .	31	0	36	0	20	10	31	10
fine . . . . . per lb.	4	6	8	0	4	6	7 6	LARD . . . . .	73	0	0	0	78	0	84	0
Good, mid. to ord.	0	8	4	3	0	8	3 9	TALLOW . . . . .	35	0	0	0	37	0	38	0
Dutch trimmed . . .	9	6	10	0	0	0	0 0	TURPENTINE, American, cks.	30	6	31	0	31	0	0	0
Russian . . . . .	0	0	0	0	0	0	0 0	PETROLEUM, Crude . . . . .	14	0	0	0	14	0	15	0
ROOTS—Calumba . . . per cwt.	30	0	40	0	40	0	52 0	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		
China . . . . .	35	0	45	0	27	0	43 0	refined, per gall.	1	3	1	8½	1	11½	1	11
Galangal . . . . .	23	0	24	0	13	0	18 0	Spirit . . . . .	1	2	1	3	0	9	0	0
Gentian . . . . .	17	0	18	0	19	0	20 0	SEEDS.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		
Hellebore . . . . .	22	0	30	0	22	0	30 0	CANARY . . . . . per qr.	40	0	46	0	60	0	65	0
Orris . . . . .	50	0	50	0	33	0	44 0	CARAWAY, English per cwt.	45	0	50	0	36	0	38	0
Pellitory . . . . .	53	0	60	0	58	0	60 0	German, &c. . . . .	27	0	41	0	32	0	44	0
Pink . . . . . per lb.	0	7	0	10	0	6	0 9	CORIANDER . . . . .	0	0	0	0	20	0	22	0
Rhatany . . . . .	0	5	0	10	0	0	0 10	HEMP . . . . . per qr.	44	0	48	0	42	0	44	0
Seneca . . . . .	2	10	3	0	1	11	2 0	LINSEED, English per qr. . .	0	0	0	0	05	0	72	0
Snake . . . . .	1	0	0	0	1	3	0 0	Black Sea & Azof	57	6	0	0	58	0	0	0
SAFFRON, Spanish . . .	44	0	0	0	27	0	34 0	Calcutta . . . . .	59	3	0	0	59	0	0	0
SALEP . . . . . per cwt.	110	0	0	0	120	0	130 0	Bombay . . . . .	60	6	0	0	60	0	0	0
SARSAPILLA, Lima per lb.	0	6	0	7	0	7	0 8	St. Petersburg . . . . .	54	0	56	0	57	0	0	0
Para . . . . .	1	0	1	3	1	0	1 3	Mustard, brown . . . per bshl.	8	0	10	6	14	0	17	0
Honduras . . . . .	1	2	1	6	1	0	1 6	white . . . . .	7	0	14	0	13	0	18	0
Jamaica . . . . .	2	6	4	4	1	4	2 6	POPPY, East India . . . per qr.	57	6	58	0	62	0	63	0
SASSAFRAS . . . . . per cwt.	0	0	0	0	14	0	15 0	SPICES.								
SCAMMONY, Virgin . . . per lb.	28	0	32	0	28	0	35 0	CASSIA LIGNEA . . . per cwt.	119	0	131	0	130	0	140	0
second & ordinary . . .	10	0	23	0	10	0	23 0	Vera . . . . .	47	0	88	0	50	0	90	0
SENNA, Bombay . . . . .	0	3½	0	6	0	3	0 5½	Buds . . . . .	160	0	175	0	140	0	160	0
Tinnevely . . . . .	0	3	1	4	0	1½	0 10	CINNAMON, Ceylon,								
Alexandria . . . . .	0	4	1	6	0	7	1 8	1st quality . . . per lb.	1	10	3	7	2	0	3	10
SERAPICETI, refined . . .	1	6	1	7	1	5	1 6	2nd do. . . . .	1	6	8	4	1	9	3	6
American . . . . .	1	6	0	0	1	4	0 0	3rd do. . . . .	1	3	3	1	1	6	3	1
SQUILL . . . . .	0	1½	0	2½	0	1	0 2½	Tellicherry . . . . .	0	0	0	0	0	0	0	0
GUMS.								Cloves, Penang . . . . .	0	10½	1	0	0	10	1	0
AMMONIAC drop . . . per cwt.	200	0	240	0	220	0	260 0	Amboyna . . . . .	0	4½	0	5½	0	5	0	6
luup . . . . .	120	0	190	0	140	0	240 0	Zanzibar . . . . .	0	3½	0	8½	0	8½	0	4½
ANIMI, fine washed . . .	300	0	340	0	340	0	320 0	GINSENG, Jam, fine per cwt.	110	0	200	0	90	0	195	0
boldscraped . . . . .	220	0	200	0	200	0	290 0	Ord. to good . . . . .	36	0	100	0	35	0	80	0
sorts . . . . .	100	0	200	0	110	0	190 0	African . . . . .	26	0	0	0	27	6	0	0
dark . . . . .	75	0	100	0	80	0	110 0	Bengal . . . . .	26	0	0	0	30	0	31	0
ARABIC, E. I., fine								Malabar . . . . .	26	0	0	0	0	0	0	0
pale picked . . . . .	76	0	85	0	77	0	84 0	Cochin . . . . .	35	0	110	0	34	0	120	0
srts, gd. to fin . . .	65	0	75	0	62	0	75 0	PEPPER, Blk, Malabar, per lb.	0	5½	0	6	0	5	0	6
garblings . . . . .	40	0	60	0	40	0	60 0	White, Tellicherry . . . . .	0	9	1	5	0	10	1	6
TURKEY, pick. gd. to fin.	170	0	210	0	180	0	220 0	Cayenne . . . . .	0	9	1	2½	0	4	0	8½
second & inf. . . . .	90	0	160	0	90	0	175 0	MACE, 1st quality . . . per lb.	3	0	3	9	2	9	3	2
in sorts . . . . .	75	0	100	0	75	0	110 0	2nd and inferior . . . . .	2	4	2	11	1	6	2	7
Gedda . . . . .	33	0	44	0	44	0	52 0	NUTMEGS, 78 to 60 to lb.	2	8	4	0	2	5	4	2
BARBARY, white . . . . .	75	0	80	0	80	0	100 0	90 to 80 . . . . .	2	2	2	7	1	10	2	4
brown . . . . .	70	0	72	6	74	0	78 0	132 to 95 . . . . .	1	6	2	1	1	5	1	9
AUSTRALIAN . . . . .	23	0	45	0	35	0	52 0	VARIOUS PRODUCTS.								
ASSAFETIDA, com. to gd . .	40	0	100	0	75	0	110 0	COCHINEAL—								
BENJAMIN, 1st qual. . . .	280	0	460	0	340	0	590 0	Honduras, black . . per lb.	2	8	3	10	3	1	4	5
2nd . . . . .	140	0	220	0	140	0	220 0	silver . . . . .	2	7	2	11	2	11	3	7
3rd . . . . .	60	0	120	0	5											







